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Register.

REPORT

OF THE

vol 348

48 Board of Health

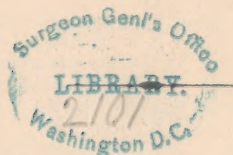
OF THE

City and Port of Philadelphia,

TO THE

MAYOR,

FOR THE YEAR 1870.



PHILADELPHIA:

PRINTED BY ORDER OF THE BOARD.

1871.

of the E. C. ...
1894

REPORT

Annual Report of the

Board of Directors

1904

AT THE ANNUAL MEETING

OF THE

BOARD OF DIRECTORS

OF THE ...

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MEMBERS AND OFFICERS
OF
The Board of Health
OF THE
City and Port of Philadelphia,
FOR THE YEAR 1870.

OFFICERS.

PRESIDENT, SECRETARY,
ELIAB WARD, M. D. CHAS. B. BARRETT.

MEMBERS.

JAMES STEEL, THOMAS STEWARDSON, M. D.,
JAMES A. McCREA, M. D., HENRY DAVIS,
RENE LA ROCHE, M. D., CONRAD S. GROVE,
JAMES WEST, EDWARD BENNETT,
GEO. MORRISON COATES, SAMUEL T. CANBY.

STANDING COMMITTEES.

Sanitary.

STEWARDSON, BARRETT, BENNETT, LA ROCHE, DAVIS.

Lazaretto.

STEEL, COATES, GROVE, WEST, McCREA.

Poudrette.

DAVIS, BARRETT, GROVE.

Accounts.

STEEL,

BENNETT,

CANBY.

Office and Library.

COATES,

BENNETT,

WEST.

Burial Grounds and Registration.

BARRETT, McCREA, STEWARDSON.

Street Cleaning.

DAVIS, STEWARDSON, STEEL, BENNETT, COATES,
BARRETT, GROVE.

DISTRICT COMMITTEES.

No. 1.—1st, 2d, 3d, 4th, 5th, 7th, 8th, and 26th Wards,
COATES, WEST, WARD.

No. 2.—6th, 9th, 10th, 11th, 12th, 13th, 14th, and 15th Wards,
McCREA, STEWARDSON, LA ROCHE.

No. 3.—20th, 21st, 22d, 24th, 27th, and 28th Wards,
CANBY, GROVE, BARRETT.

No. 4.—16th, 17th, 18th, 19th, 23d, and 25th Wards,
BENNETT, STEEL, DAVIS.

EXECUTIVE OFFICERS.

Health Officer,

JOHN E. ADDICKS.

Port Physician,

H. ERNEST GOODMAN, M. D.

Lazaretto Physician,

J. HOWARD TAYLOR, M. D.

Quarantine Master,

J. H. GIHON, M. D.

ELECTIVE OFFICERS.

Chief Clerk,

WILLIAM P. TROTH.

Assistant Clerks,

AUGUSTINE T. LYNCH,

ROBERT CARNS.

Registration Clerk,

GEORGE E. CHAMBERS.

Assistant Registration Clerks,

CHAS. WIRGMAN, HAM'N PATTERSON, CHAS. W. MURRAY.

Attending Physician—Municipal Hospital,

WM. M. WELCH, M. D.

Steward of Lazaretto,

LEWIS KUGLER.

Matron of Municipal Hospital,

LYDIA TOMLINSON.

Measurers,

CONRAD B. ANDRESS,

JOHN S. THACKARA.

*Nuisance and Street Inspectors,*WILLIAM L. WILLIAMS,
MERRITT GIBSON,PETER K. YOUNG,
SYLVESTER H. MARTIN.*Night and Street Inspector,*

JACOB KIPLE.

Messengers and Street Inspectors,

ANDREW McDOLE,

SAMUEL T. MORTON.

Runner,

DAVID BROWN.

VACCINE PHYSICIANS.

First District—Comprising the 1st and 26th Wards,

J. T. WILLIAMS, No. 1410 Ellsworth street.

Second District—Comprising the 2d, 3d and 4th Wards,

JOSEPH HERITAGE, No. 334 Catharine street.

Third District—Comprising the 5th, 7th and 8th Wards,

J. G. ALLEN, No. 1237 Spruce street.

Fourth District—Comprising the 6th, 9th and 10th Wards,

H. LEAMAN, No. 231 North Eleventh street.

Fifth District—Comprising the 11th, 12th, 13th, 14th and 15th Wards,

L. K. BALDWIN, No. 1828 Coates street.

Sixth District—Comprising the 16th, 17th, 20th and 28th Wards,

S. N. TROTH, No. 1226 North Seventh street.

Seventh District—Comprising the 18th and 19th Wards,

J. L. RIHL, No. 2009 Frankford road.

Eighth District—Comprising the 23d and 25th Wards,

F. F. CASSADAY, No. 4450 Main street, Frankford.

Ninth District—Comprising the 21st Ward,

WILLIAM C. TODD, No. 4407 Main street, Manayunk.

Tenth District—Comprising the 24th and 27th Wards,

ELISHA CROWELL, corner of Fortieth and Market streets.

Eleventh District—Comprising the 22d Ward,

ALFRED C. LAMB DIN, No. 211 Price street, Germantown.

CONTRACTORS FOR CLEANING STREETS, COLLECTING ASHES, &c.

- First District*—From the north line of Washington avenue south, all the streets, lanes, alleys, &c., and from Delaware river to west line of Broad street,
PETER MANTON, 708 South Sixth street.
- Second District*—From north line of Washington avenue to north line of South street, and from Delaware river to west line of Sixth street,
JAMES COLLINS, No. 1814 Kater street.
- Third District*—From north line of Washington avenue to north line of South street, and from west line of Sixth street to west line of Broad street,
SAMUEL B. COLLINS, No. 625 South Seventeenth street.
- Fourth District*—From north line of South street, south, and from west line of Broad street to the Schuylkill river, all streets, lanes, alleys, &c.,
JOHN MORRIDE, No. 709 South Twentieth street.
- Fifth District*—From north line of South street to north line of Chestnut street, and from Delaware river to west line of Sixth street,
JAMES MCBRIDE, No. 709 South Twentieth street.
- Sixth District*—From north line of South street to north line of Chestnut street, and from west line of Sixth street to west line of Broad street,
JAMES CALLEN, 768 South Broad street.
- Seventh District*—From north line of South street to north line of Chestnut street, and from the west line of Broad street to the Schuylkill river,
HENRY BICKLEY, 1622 Market street.
- Eighth District*—From north line of Chestnut street to north line of Vine street, and from Delaware river to west line of Sixth street,
JOHN GALBRAITH, No. 426 North Delaware avenue.
- Ninth District*—From north line of Chestnut street to the north line of Vine street, and from west line of Sixth street to west line of Broad street,
DANIEL McNICHOL, 123 Jacoby street.
- Tenth District*—From north line of Chestnut street to north line of Vine street, and from west line of Broad street to the Schuylkill river,
HENRY BICKLEY, 1622 Market street.
- Eleventh District*—From north line of Vine street to north line of Poplar street, and from Delaware river to west line of Sixth street,
JOHN GALBRAITH, 426 North Delaware avenue.
- Twelfth District*—From north line of Vine street to north line of Poplar street, and from west line of Sixth street to the west line of Broad street,
HENRY E. BICKLEY, 1622 Market street.
- Thirteenth District*—From north line of Vine street to north line of Poplar street, and from west line of Broad street to Schuylkill river,
HENRY E. BICKLEY, 1622 Market street.
- Fourteenth District*—From north line of Poplar street to north line of Oxford street, and from west line of Frankford road along said Frankford road to south line of Laurel street, to Delaware river, and from Delaware river to west line of Sixth street,
JAMES O'ROURKE, 1129 Somerset street.
- Fifteenth District*—Beginning at Delaware river on south side of Laurel street, along said street to west line of Frankford road, along west line of Frankford road to the north line of Oxford street, and from north line of Oxford street to north line of Norris street, and from Delaware river to west line of Sixth street,
JAMES O'ROURKE, 1129 Somerset street.
- Sixteenth District*—From north line of Norris street to north line of Alleghany avenue, and from Delaware river to west line of Sixth street, all streets, lanes, alleys, &c.,
THOMAS D. STITES, 514 Richmond street.
- Seventeenth District*—From north line of Poplar street to north line of Alleghany avenue, and from west line of Sixth street to west line of Broad street, all streets, lanes, alleys, &c.,
JOSEPH JOHNSON, 1312 Marlborough street.
- Eighteenth District*—That part of City of Philadelphia lying west of Schuylkill river,
DANIEL McLAUGHLIN, 3724 Lancaster avenue.
- Nineteenth District*—From north line of Poplar street to north line of Berks street, and from west line of Broad street to Schuylkill river, all streets, lanes, alleys, &c.,
EDWARD McCAFFREY, 1624 Swain street.
- Twentieth District*—That part of City lying north of Alleghany avenue, known as Frankford and Bridesburg,
THOMAS D. STITES, 514 Richmond street.
- Twenty-first District*—That part of the City known as Manayunk,
JAMES CLEGG, Manayunk.

REPORT

OF THE

BOARD OF HEALTH OF PHILADELPHIA,

For the Year 1870.

Office of the Board of Health,

PHILADELPHIA, *February 21, 1871.*

HON. DANIEL M. FOX,

Mayor of the City of Philadelphia.

SIR:—In compliance with the provisions of the Act of Consolidation, the Board of Health respectfully submit the following

REPORT FOR THE YEAR 1870.

The general sanitary condition of the City has not been as favorable as that of the preceding year, the excess of deaths amounting to one thousand nine hundred and sixty-four (1,964), or 13.20 per cent.

The valuable and highly interesting statistics furnished by the Health Officer, exhibit seventeen thousand one hundred and ninety-four (17,194) births, six thousand four hundred and twenty-one (6,421) marriages, and sixteen thousand seven hundred and fifty (16,750) deaths. These tables are of great value to the statistician in the United States as well as in foreign countries.

LAZARETTO AND QUARANTINE.

The report of this department for the past year is very important, and its record of death at the Lazaretto most sorrowful, occasioned by the arrival, in the month of June, of the brig Home, from Black River, Jamaica, infected with Yellow Fever, spreading disease and death at the Quarantine and its immediate neighborhood. Referring to the report itself for all the detailed history of this season's Quarantine, the Board of Health especially desire to call attention to the death by this virulent fever of so many of the officers and employees of the Lazaretto, who, with unflinching courage and faithful performance of their duty, died at their post; it is proper that their names should be recorded.

WILLIAM S. THOMPSON,	ROBERT GARTSIDES,
Lazaretto Physician.	Quarantine Master.
MRS. EVE KUGLER,	MRS. FANNY GARTRELL,
Stewardess.	Head Nurse.
WILLIAM DILLMORE,	CHARLES HANCOCK,
Gardener.	Carpenter.
WILLIAM HESS, Assistant Gardener.	

MUNICIPAL HOSPITAL.

The report of this department, under direction of the Board of Health, for the past year, is of the highest interest, the fullest capacity of the hospital employed and its great usefulness made most apparent; it was mainly filled with patients suffering with Relapsing Fever, and while all praise is due, for the faithful performance of their duties, to the physicians in charge and other employees, very high commendation must be rendered to the Sanitary Committee of our Board, who gave most untiring attention to all the unusual demands made upon their superintendence of the hospital during the many months that it was filled with the poor and sick. This hospital was built and possession taken of it in 1865, and up to the 1st of January, this year, has received in all 1,014 patients, and of this number 640 were received during the past year.

STREET CLEANING.

Proposals were invited by the Board in December, 1869, for the cleaning of the streets, market-houses, removal of ashes, dead animals, etc., for a period of two years, from January 1st, 1870, to December 31st, 1871.

The aggregate number of bids was 285, for the several districts, 21 in number; the maximum amount of bids per year was \$242,158; the minimum, \$120,777; the difference between the maximum and minimum, \$121,381.

The Board, after careful examination as to the character of the bids, awarded the several contracts in the aggregate to the amount of \$160,409 per year. Certain bidders were disappointed because the Board did not award the contracts to the lowest bidder. Application was made to the Court of Common Pleas, by J. Duross O'Brien, Esq., for an injunction to restrain the Board from awarding contracts except to the lowest bidder. The Board was represented by W. L. Hirst and T. J. Barger, Esqs. The case was heard by his Honor, Judge Allison, who dismissed the application, stating that the Board had a right to exercise sound discretion in the awards, and the lowest bidder was not necessarily the best bidder by reason of simply being the lowest.

The next step was, John Samuel, Esq., filed a bill in equity in the Supreme Court, on behalf of Peter Connor, Barrett Connor, and Daniel Glacking, setting forth that they were lower bidders for certain districts than those to whom the Board had awarded the contracts, praying the awards should be annulled. The case was heard by Chief Justice Thompson. W. L. Hirst, Esq., appeared for the Board. The Chief Justice dismissed the case, sustaining the Board in their action. The Court of Common Pleas and the Supreme Court have both decided this important question, which has so long stood in the way of the various departments: "That the lowest bidder is not necessarily the best bidder."

The Board, in the discharge of this unthankful and unsought-for duty, have given a very large amount of valuable time, with

an earnest endeavor to bring about the much desired object of clean streets, and they believe that under no administration who have been charged with cleaning the City, has it ever been so thoroughly clean as it has been during the past year. One great drawback to the cleanliness of the streets arises from the fact that the Gas, Water, and Highway Departments, railroads, culvert contractors, all open and pave at pleasure, and leave as filthy as suits their convenience. Councils should promptly place, by ordinance, all paving under the Highway Department, and no opening for any purpose should be made without a permit from that department, and a record kept, and the department held responsible for the character of the paving, and the condition of the street after paving.

From the best information that can be obtained, there are between two and three miles of wooden pavements, and about the same of cubical blocks, making altogether between five and six miles of smooth pavements; the balance of the paving is made up of cobble stone, much of it is sadly out of repair, and yet it is but fair to say that it is much improved in repairs during the past year. The day is past for cobble pavements and surface drainage; the public demand a better character of pavement and under-drainage with traps to all the inlets. There are nearly three thousand inlets, many of them without traps, and that too in the very heart of the City, throwing out in the warm season a malaria that engenders disease and death. The great thoroughfares will never be satisfactorily cleaned until surface drainage and cobble stones are abandoned, and citizens learn by experience that there is a penalty for throwing the debris from repairs, hoops from groceries, straw from crockery stores, etc., into the public streets, as a legacy for the street contractor to remove. All this can readily be cured with an efficient police, whose duty it should be to arrest and bring to punishment all violators of the City ordinances, as well as to cause the removal of all snow from the sidewalks, and the gutters to be opened in front of all properties whether occupied or not, together with all City property. If a thousand vigilant policemen which the City

is now paying were to lend a helping hand to correct these abuses, there would be much less complaint about dirty streets. A contractor may clean a street to-day, and an hour after some one will throw a lot of dirt from repairs, or a cellar, yard, or store, which becomes a nucleus for the accumulation of filth. Contractors cannot watch these violators—the police could : how can thirteen contractors without police powers remedy what is so clearly the duty of the police to prevent on our five hundred miles of streets, alleys, and highways?

The cost for cleansing, estimating there are five hundred miles, is about \$320 per mile. New York has about six hundred miles of streets ; cost of cleaning streets, removal of ashes, garbage, etc., is \$713,500, or about \$1,189 per mile, equal to about three and a half times as much as Philadelphia.

Boston has about 191 miles, which includes the consolidation of South and East Boston, Roxbury and Dorchester, of which there are about 50 miles of paved streets, costing about \$240,000 for cleansing streets, cess-pools, public walks, squares, public gardens, etc.

From the foregoing it will be seen that Philadelphia is cleaned at a much less cost per mile than New York or Boston.

From the past experience it is believed that in future contracts certain streets should be contracted to be swept at least twice a week, others once a week, and again others once a month, which would be more satisfactory to the public so long as surface drainage and cobble paving are the order of the day.

Report of Vessels visited during the Year 1870.

British European Ports,	-	-	-	-	152
French “ “	-	-	-	-	12
Spanish “ “	-	-	-	-	14
Baltic “	-	-	-	-	10
German “	-	-	-	-	34
Italian “	-	-	-	-	46
West India “	-	-	-	-	460
East “ “	-	-	-	-	3
Portugal “	-	-	-	-	7
South American “	-	-	-	-	26
Greenland “	-	-	-	-	13
British N. America “	-	-	-	-	104
Mexican “	-	-	-	-	1
Gulf Ports—U. S.,	-	-	-	-	40
					922
Coastwise,	-	-	-	-	48
Total,	-	-	-	-	970

Table of Nuisances visited and abated by order of the Board of Health, during the year 1870.

DESCRIPTION.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	TOTAL
Alleys and Courts—Filthy..	4	1	6	40	65	47	23	16	12	11	7	2	234
Cellars.....	3	4	3	26	180	71	77	61	21	10	16	8	480
Cow and Horse Stables, “	.....	1	1	4	11	11	5	3	3	1	.....	.....	40
Cellar Tenements, “	.....	.....	.....	.....	14	1	.....	1	.....	.....	.....	.....	16
Drains & Water courses, Defective	2	3	1	7	58	27	26	16	10	18	12	7	187
Dead Animals, Offal, filth, &c.	.....	.....	2	3	9	21	11	8	7	1	2	2	66
Drain & Water Sinks, Filthy	.....	.....	.....	.....	5	4	1	.....	.....	1	.....	.....	11
Factories & Dye houses, “	.....	.....	.....	1	2	.....	1	4	1	.....	.....	.....	9
Fat rendering and Skin dressing Establishments.....	.....	.....	.....	.....	.....	6	13	1	6	.....	.....	.....	26
Fish and Bone-boiling Est's..	.....	.....	1	.....	.....	1	4	2	.....	.....	.....	.....	8
Gutters and Streets unpaved Filthy .....	.....	.....	.....	4	3	10	10	5	4	5	3	1	45
Houses and Rooms, Filthy...	1	2	3	20	85	53	37	19	23	2	8	2	255
Hogs and Hog pens, “	3	2	10	17	26	39	27	26	7	6	2	2	167
Manure Heaps and Poudrette Pits, Filthy.....	.....	5	1	3	29	24	29	18	9	5	1	1	125
Market Houses, Filthy.....	.....	1	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	2
Privy Wells, full & overflowing.	16	55	60	201	477	223	198	180	123	61	36	22	1692
“ “ leaking, exposed.	12	12	15	37	72	97	40	54	43	24	19	5	430
Rag and Bone Shops, Filthy	.....	.....	.....	2	34	1	8	2	1	.....	.....	.....	48
Ponds of Stagnant Water....	2	3	3	12	22	25	18	4	6	2	1	.....	98
Slaughter Houses, Filthy....	.....	1	2	5	6	16	1	6	3	2	.....	3	45
Sheep and Goat Pens, Filthy.	.....	1	1	.....	4	3	1	.....	1	.....	.....	1	12
Water Closets, foul & leaking.	1	1	1	2	2	4	1	1	.....	.....	.....	.....	14
Water & Drain pipes, leaking.	.....	2	1	5	6	13	5	12	13	9	5	1	72
Vacant Lots, Filthy.....	1	.....	4	13	26	27	23	10	3	4	3	1	115
Yards.....	2	1	20	63	28	25	12	14	8	3	1	.....	177
Miscellaneous.	3	.....	1	3	9	5	3	3	1	3	2	.....	53
Totals.....	99	95	136	468	1173	754	575	466	305	169	118	58	4407
Permits issued to clean Privy Wells.....	390	393	670	870	1708	286	300	191	153	416	310	226	5013

Report of number of Cases Vaccinated during the year 1870.

Districts.	Physicians.	1st. Qr.	2d. Qr.	3d. Qr.	4th. Qr.	Total.
First.....	J. T. Williams.....	24	184		89	297
Second.....	Joseph Heritage.....			619	467	1,086
Third.....	J. G. Allen.....	59	47		263	369
Fourth.....	H. Leaman.....		235		75	310
* Fifth.....	Wm. M. Welsh.....		743		209	952
Sixth.....	S. N. Troth.....	113	790	202	100	1,205
Seventh.....	J. L. Rihl.....		540			540
Eighth.....	F. F. Cassiday.....	270	240	270	330	1,110
Ninth.....	Wm. C. Todd.....	60	120			180
Tenth.....	Elisha Crowell.....	295	295	264	297	1,141
		821	3,194	1,345	1,830	7,190

The Street Cleaning Districts of Philadelphia, their Boundaries, Inlets in each, &c.

Districts.	Boundaries.	Inlets.
1st.	South from Washington avenue, and from Delaware avenue to Broad street, - - - - - Peter Manton, Contractor.	150
2d.	From Delaware avenue to Sixth street, and from Washington avenue to South street, - - James Collins, Contractor.	64
3d.	From Sixth street to Broad street, and from Washington avenue to South street, - - Samuel B. Collins, Contractor.	89
4th.	From Broad street to the Schuylkill river, and south from South street, - - - - - John McBride, Contractor.	24

* The cases returned of the 4th quarter of the 5th District were by L. K. Baldwin, M. D. elected Vaccine Physician, vice W. M. Welsh elected Physician of the Municipal Hospital.

Districts.	Boundaries.	Inlets.
5th.	From Delaware avenue to Sixth street, and from South street to Chestnut street, - - - James McBride, Contractor.	151
6th.	From Sixth street to Broad street, and from South street to Chestnut street, - - - James Callen, Contractor.	135
7th.	From Broad street to the Schuylkill river, and from South street to Chestnut street, - - Henry Bickley, Contractor.	201
8th.	From Delaware avenue to Sixth street, and from Chestnut street to Vine street, - - - John Galbraith, Contractor.	147
9th.	From Sixth street to Broad street, and from Chestnut street to Vine street, - - - Daniel McNichol, Contractor.	147
10th.	From Broad street to the Schuylkill river, and from Chestnut street to Vine street, - - Henry Bickley, Contractor.	160
11th.	From Delaware avenue to Sixth street, and from Vine street to Poplar street, - - - John Galbraith, Contractor.	159
12th.	From Sixth street to Broad street, and from Vine street to Poplar street, - - - Henry E. Bickley, Contractor.	249
13th.	From Broad street to the Schuylkill river, and from Vine street to Poplar street, - - - Henry E. Bickley, Contractor.	225
14th.	From Poplar street to Oxford street, and from Frankford road to Laurel street, thence to Dela- ware river, and from Delaware river to Sixth street, - - - James O'Rourke, Contractor.	183

Districts.	Boundaries.	Inlets.
15th.	From Laurel street thence to Frankford road, thence to Oxford street, thence to Norris street, and from Delaware river to Sixth street, - -	157
	James O'Rourke, Contractor.	
16th.	From Norris street to Allegheny avenue, and from Delaware River to Sixth street, - -	172
	Thomas D. Stites, Contractor.	
17th.	From Poplar street to Allegheny avenue, and from Sixth street to Broad street, - - -	136
	Joseph Johnson, Contractor.	
18th.	All west of the Schuylkill river, - - -	120
	Daniel McLaughlin, Contractor.	
19th.	From Poplar street to Berks street, and from Broad street to the Schuylkill river, - -	75
	Edward McCaffrey, Contractor.	
20th.	Frankford and Bridesburg, - - - -	15
	Thomas D Stites, Contractor.	
21st.	Manayunk, - - - - -	40
	James Clegg, Contractor.	
22d.	Germantown, - - - - -	11
	Total, - - - - -	2,810

Appropriations and Expenditures.

GENERAL APPROPRIATION.		Amount appropri'd.	Amount expended.	Balance merging.
Ordinance of City Councils, approved March 21st, 1870.....		\$234,710 00		
<i>Item.</i>				
1. For Salary of Health Officer.....		2,100 00	2,100 00	
2. For Salary of Chief Clerk.....		1,800 00	1,800 00	
3. For Salary of two Assistant Clerks.....		2,000 00	2,000 00	
4. For Salary of Registration Clerk.....		1,200 00	1,200 00	
5. For Salaries of three Assistant Regis- tration Clerks.....		2,550 00	2,550 00	
6. For Salary of Port Physician.....		1,200 00	1,200 00	
7. For Salary of Runner.....		500 00	500 00	
8. For Salaries of four Nuisance Inspect- ors and two Messengers.....		3,960 00	3,960 00	
9. For Salary of Night Inspector.....		660 00	660 00	
10. For Salaries of two Vessel Inspectors, from June 1st to October 1st.....		720 00	360 00	360 00
11. For pay of ten Vaccine Physicians and ten Collectors.....	\$5,000 00			
By transfer to Items 26, 27, 31 and 32, approved September 28th, 1870.....	600 00			
		4,400 00	3,687 65	712 35
12. For Fuel, Furniture, Repairs, Postage and Incidentals.....		700 00	684 15	15 85
13. For Printing, Advertising, Books, News- papers, Blanks and Stationery.....		700 00	393 22	306 78
14. For Removal of Nuisances.....		7,000 00	6,828 30	171 70
15. For Carriage Hire and Railroad Tickets for District Committees.....		400 00	400 00	
16. For Carriage Hire and Railroad Tickets for Burial ground and Poudrette Com- mittees, and for expenses incurred in executing the Poudrette Laws.....		400 00	272 20	127 80
17. For the use of the Committee on Regis- tration in executing the Registration Act, and for expenses of office; also, for Books, Stationery, Blanks and Ad- vertising	1,200 00			
Transfer from Item 52, approved Decem- ber 6th, 1870.....	200 00			
		1,400 00	1,377 83	22 17
18. For Salary of Lazaretto Physician.....		1,500 00	1,500 00	
19. For Salary of Quarantine Master.....		1 000 00	1,000 00	
Amounts carried forward.....		\$34,190 00	32,473 35	1,716 65

Appropriations and Expenditures—Continued.

GENERAL APPROPRIATION.		Amount approp'd.	Amount expended.	Balance merging.
Amounts brought forward.....		\$34,190 00	32,473 35	1,716 64
<i>Item.</i>				
20. For Salary of Steward, Lazaretto.....		1,200 00	1,200 00	
21. For Salary of Gardener, Lazaretto.....		240 00	240 00	
22. For Salaries of Bargemen (or Tugman) and Engineer, Lazaretto.....		2,700 00	2,700 00	
23. For Salary of Male Nurse, Lazaretto....		150 00	108 67	41 33
24. For Salary of Female Nurse, Lazaretto..		110 00	105 97	4 03
25. For Salary of Watchman, Lazaretto.....		100 00	100 00	
26. For Clothing, Bedding, Brushes, Furni- ture, Soap, Cleansing and Incidentals, Lazaretto	\$600 00			
Transfer from Items 11 and 43, approved September 28th, 1870.....	400 00	1,000 00	998 95	1 05
27. For Medicines, Lime, Coffins and Burial Expenses, Lazaretto.....	300 00			
Transfer from Items 11 and 43, approved September 28th, 1870.....	200 00	500 00	479 06	20 94
28. For Coal, Oil, Paints, Fluid, Flags, Boats and Repairs, Lazaretto.....		600 00	599 85	15
29. For Carriage Hire and Railroad Tickets for Lazaretto Committee.....		200 00	138 20	61 80
30. For Board and Washing the Clothing of Bargemen, Nurses, Patients and Of- ficers, Lazaretto.....	1,200 00			
Transfer from Item 52, approved Decem- ber 6th, 1870.....	100 00	1,300 00	1,231 18	68 82
31. For General Repairs to Buildings, Grounds and Appurtenances, and for Taxes and Insurance, Lazaretto.....	2,500 00			
Transfer from Items 11 and 43, approved September 28th, 1870.....	600 00			
Transfer from Item 52, approved Decem- ber 6th, 1870.....	300 00	3,400 00	3,397 53	2 47
32. For Outside Channel Visits, and taking vessels to Quarantine, and for Quarters for Boats and Bargemen (including the purchase and maintenance of a Steam Tug Boat).....	8,250 00			
Transfer from Items 11 and 43, approved September 28th, 1870.....	200 00			
Transfer from Item 52, approved Decem- ber 6th, 1870.....	100 00	8,550 00	8,540 32	9 68
33. For Carrying Mails, Porterage and Postage, Lazaretto.....		200 00	198 65	1 35
34. For Ice and filling Ice House, Lazaretto.		300 00	289 54	10 46
Amounts carried forward.....		\$54,740 00	52,801 27	1,938 73

Appropriations and Expenditures—Continued.

GENERAL APPROPRIATION.		Amount appropriated.	Amount expended.	Balance merging.
Amounts brought forward.....		\$54,740 00	52,801 27	1,938 73
<i>Item.</i>				
35. For Medical Attendance, Municipal Hospital.....		2,000 00	1,996 67	3 33
36. For Salary of Matron, Municipal Hospital.....		500 00	500 00	
37. For Salary of Laundress, Municipal Hospital.....		240 00	165 60	74 40
38. For Salaries of two Male Nurses, Municipal Hospital.....		840 00	740 00	100 00
39. For Salaries of two Female Nurses, Municipal Hospital.....		480 00	440 00	40 00
40. For Salary of Fireman, Municipal Hospital.....		300 00	240 00	60 00
41. For Salary of Watchman, Municipal Hospital.....		300 00	290 83	9 17
42. For Salaries of two Gardeners, Municipal Hospital.....		500 00	371 50	128 50
43. For Board and Washing for Patients, Nurses and Officers, Municipal Hospital.....	\$3,900 00			
By transfer to Items 26, 27, 31 and 32, approved September 28th, 1870.....	800 00			
		3,100 00	2,887 48	212 52
44. For Clothing, Bedding, Furniture, Repairs and Incidentals, Municipal Hospital.....		500 00	495 18	4 82
45. For Fuel, Lights, Brushes, Soap, Cleansing and Incidental Supplies, Municipal Hospital.....		1,500 00	1,080 61	419 39
46. For Medicines, Coffins and Burial Expenses, Municipal Hospital.....		800 00	752 23	47 77
47. For Carriage Hire and Railroad Tickets, Conveyance of Patients, Tolls, Portage and Postage, Municipal Hospital.....		500 00	348 94	151 06
48. For General Expenses of Sanitary Committee, Printing, Blanks and Stationery, Municipal Hospital.....		300 00	101 94	198 06
49. For Purchase of Horses, Vehicles and Harness, and for the Keep of and Repairs to the same, Municipal Hospital.....		1,200 00	920 08	279 92
50. For Taxes, Insurance and General Improvements and Repairs to Buildings, Grounds and Appurtenances, including the Maintenance of Telegraph, Municipal Hospital.....		1,200 00	1,171 37	28 63
Amounts carried forward.....		\$69,000 00	65,303 70	3,696 30

Appropriations and Expenditures—Continued.

GENERAL APPROPRIATION.		Amount appropri'd.	Amount expended.	Balance merging.
Amounts brought forward.....		\$69,000 00	65,303 70	3,696 30
<i>Item.</i>				
51. For Pay of Contractors for Cleansing the Streets and Markets, and Removing Ashes, Dead Animals and Garbage therefrom.....		159,910 00	159,611 37	298 63
52. For Stationery and Printing, Street Cleaning, &c.....		\$2,000 00		
By transfer to Items 17, 30, 31 and 32, approved December 6th, 1870.....		700 00		
		1,300 00	538 02	761 98
53. For Salaries, Street Cleaning, &c.....		3,000 00	2,860 00	140 00
54. For Incidentals, Street Cleaning, &c.....		1,500 00	820 25	679 75
Total.....		\$234,710 00	229,133 34	5,576 66

SPECIAL APPROPRIATIONS.		Amount appropri'd.	Amount expended.	Balance merging.
Ordinance to make an Appropriation to defray expenses incurred or to be incurred by the Board of Health in the Removal of Nuisances in the Infected District, the Treatment of Patients affected with the Relapsing Fever, and the employment of additional Nurses and other Employees at that Institution, approved June 29th, 1870.....		\$10,000 00	9,979 05	20 95
1. Ordinance to make an Appropriation for defraying expenses incurred or to be incurred by the Board of Health in the Removal of Nuisances, the Treatment of Patients at the Municipal Hospital, the employment of additional Nurses and other Employees at that Institution, approved July 5th, 1870.....		20,000 00	18,097 41	1,902 59

RECAPITULATION.

Ordinance approved March 21st, 1870.....	\$234,710 00	229,133 34	5,576 66
Ordinance approved June 29th, 1870.....	10,000 00	9,979 05	20 95
Ordinance approved July 5th, 1870.....	20,000 00	18,097 41	1,902 59
Total.....	\$264,710 00	257,209 80	7,500 20

Receipts during Year 1870.

Foreign fees, - - - - -	\$6,160 00
Coasting " - - - - -	505 00
Examination of passengers, - - - - -	271 50
Outside channel visits, - - - - -	2,040 00
Repayment of costs, - - - - -	5,258 80
Board of patients, - - - - -	190 98
Licenses to clean privy wells, - - - - -	2,400 00
Permits " " - - - - -	6,971 00
" to remove dead bodies, - - - - -	768 00
" to unload fish, hides and vegetables, - - - - -	97 50
Miscellaneous, - - - - -	523 93
	\$25,186 71

Amount of liens placed in the hands of City Solicitor
for collection during the year 1870, - - - \$5,283 67

MUNICIPAL HOSPITAL,

PHILADELPHIA, *January, 1871.*

CHARLES B. BARRETT, Esq.,

Secretary Board of Health.

SIR:—From the first of January, 1870, to the thirty-first of August following, a period of eight months, at which time my connection with the Hospital ceased, there were received for treatment five hundred and ninety patients, with the following diseases, viz :

Relapsing Fever, White, 246 } Colored, 244 } - - - - -	490
Typhoid Fever, - - - - -	20
Yellow Fever, - - - - -	2
Scarlet Fever, - - - - -	3
Irritative Fever, - - - - -	1
Small Pox, - - - - -	2

Varioloid, - - - - -	7
Chicken Pox, - - - - -	1
Ship Fever, - - - - -	2
Drunkenness, - - - - -	21
Delirium Tremens, - - - - -	7
Measles, - - - - -	2
Bronchitis, - - - - -	1
Consumption of Lungs, - - - - -	2
Chronic Alcoholism, - - - - -	1
Diarrhœa, - - - - -	1
Erysipelas, - - - - -	1
Debility, - - - - -	6
Leucocythemia, - - - - -	1
Pleurisy, - - - - -	1
Congestion of Lungs, - - - - -	1
Whooping Cough, - - - - -	3
Pneumonia, - - - - -	1
Congestion of Brain, - - - - -	1
Admitted without Disease, - - - - -	12
Total, - - - - -	<u>590</u>

NATIVITY OF PATIENTS.

United States, - - - - -	415
Ireland, - - - - -	138
England, - - - - -	11
Scotland, - - - - -	7
Wales, - - - - -	2
Germany, - - - - -	10
West Indies, - - - - -	4
Switzerland, - - - - -	1
France, - - - - -	2
Total, - - - - -	<u>590</u>

SEX.

Male,	-	-	-	-	-	284
Female,	-	-	-	-	-	306
Total,	-	-	-	-	-	<u>590</u>

COLOR.

White,	-	-	-	-	-	329
Colored,	-	-	-	-	-	261
Total,	-	-	-	-	-	<u>590</u>

DEATHS.

White—Male.

Typhoid Fever,	-	-	-	-	-	7
Relapsing Fever,	-	-	-	-	-	1
Yellow Fever,	-	-	-	-	-	1
Congestion of Brain,	-	-	-	-	-	1
Delirium Tremens,	-	-	-	-	-	1
Inanition,	-	-	-	-	-	2
						<u>13</u>

White—Female.

Relapsing Fever,	-	-	-	-	-	3
Typhoid Fever,	-	-	-	-	-	3
Ship Fever,	-	-	-	-	-	1
Bilious Dysentery,	-	-	-	-	-	5
Debility,	-	-	-	-	-	4
Consumption of Lungs,	-	-	-	-	-	2
Chronic Alcoholism,	-	-	-	-	-	1
Delirium Tremens,	-	-	-	-	-	1
Leucocythemia,	-	-	-	-	-	1
Old Age,	-	-	-	-	-	1
Hemorrhage from Bowels,	-	-	-	-	-	1
Inanition,	-	-	-	-	-	1
Acute Dysentery,	-	-	-	-	-	1
						<u>25</u>

Colored—Male.

Relapsing Fever,	-	-	-	-	48
Typhoid Fever,	-	-	-	-	2
Debility,	-	-	-	-	1
Syphilis,	-	-	-	-	1
					52

Colored—Female.

Relapsing Fever,	-	-	-	-	14
Debility,	-	-	-	-	1
• Congestion of Lungs,	-	-	-	-	1
Old Age,	-	-	-	-	1—17
Total deaths,	-	-	-	-	107

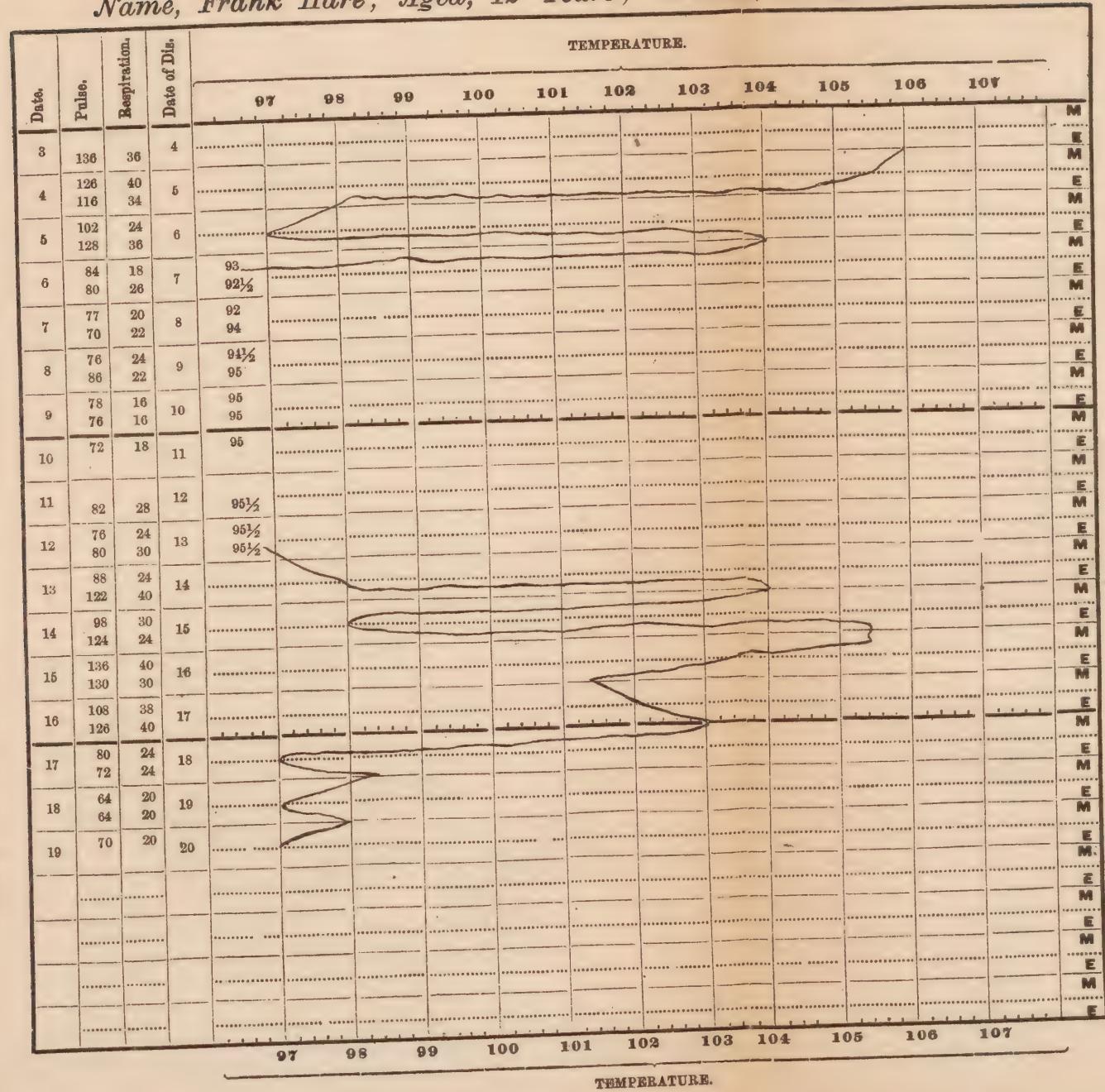
Percentage of deaths, Relapsing Fever (White),	-	-	1.6
“ “ “ “ (Colored),	-	-	25.4
Aggregate percentage, Relapsing Fever,	-	-	13.4
Percentage from all causes (White),	-	-	11.5
“ “ “ (Colored),	-	-	26.4

The visitation of Relapsing Fever to our City during the present year, occurring as it did (and always does) among that class who are never prepared to contend against the inroads of an epidemic, and who are, moreover, obnoxious to the most depraved forms of disease, devolved upon the Board of Health a great amount of labor.

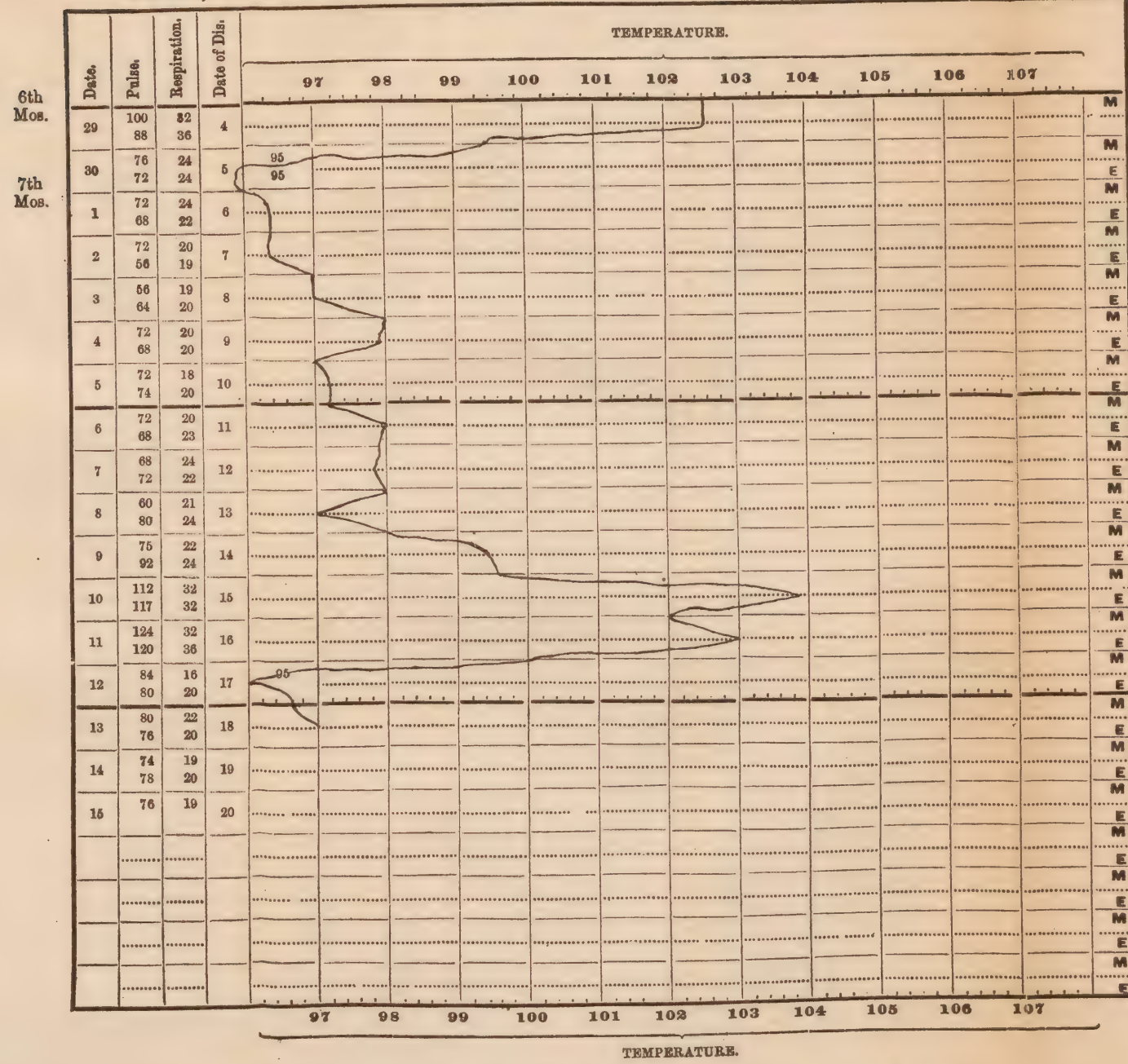
The few sporadic cases that occurred in the early part of the year did not attract sufficient attention to warrant the belief that the disease would become epidemic to any great extent. When, however, the cases began to multiply, in what subsequently became known as the “Alaska district,” among a class who yearly fill the wards of the Almshouse, and who naturally sought that institution upon the first appearance of sickness in their midst, it soon became apparent that the facilities for the proper management of the disease did not exist in the building.

SICK THREE DAYS BEFORE ADMISSION.

Name, Frank Hare; Aged, 12 Years; Disease, Relapsing Fever.

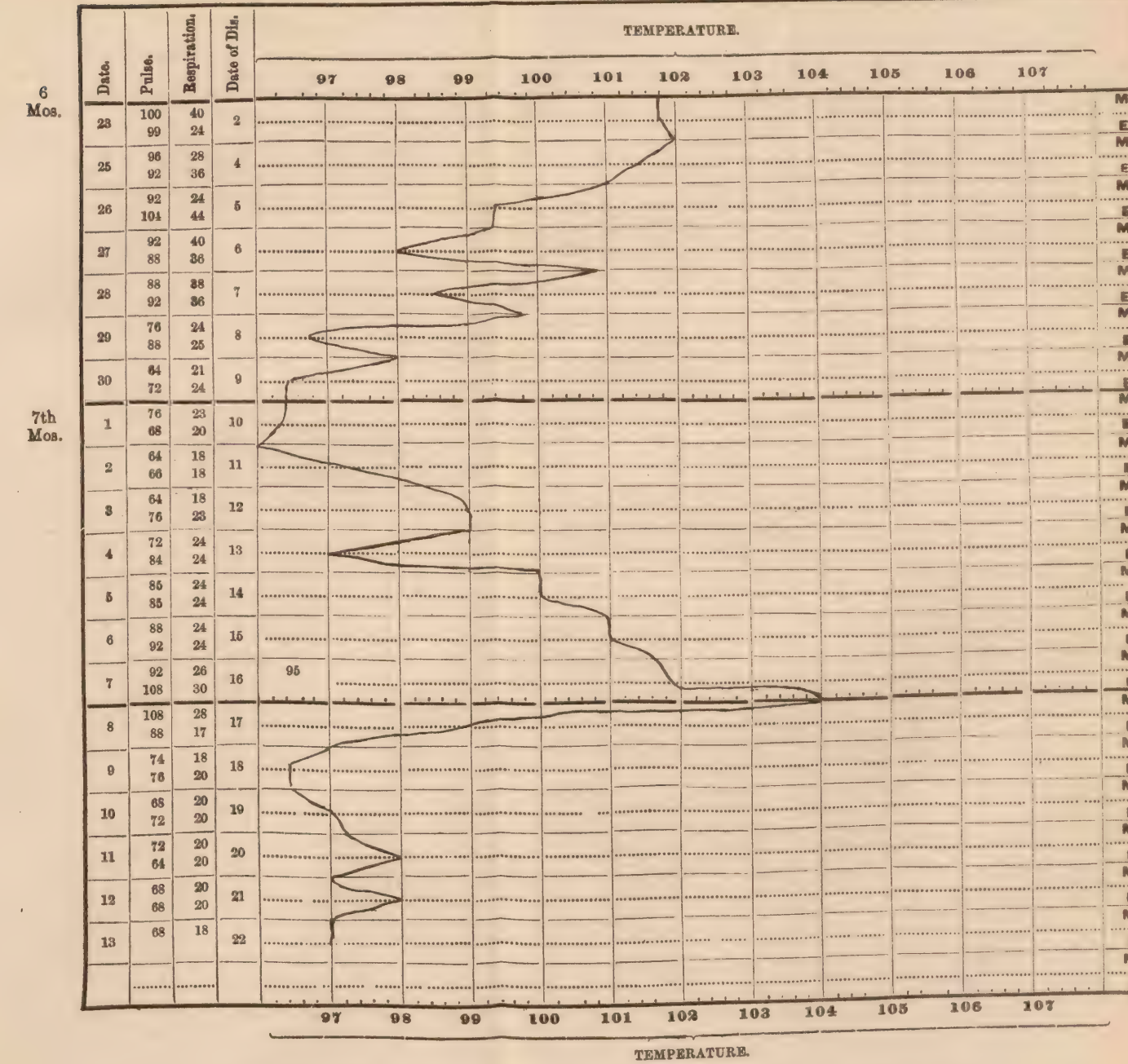


Name, Edward Parker; Aged, 27 Years; Disease, Relapsing Fever.



COLORED.—Relapse a few hours after 14th day of disease.—Discharged.

Name, John O'Brien; Aged, 16 Years; Disease, Relapsing Fever.



WHITE.—Relapse occurred on the 14th day of the disease.—Discharged.

crowded as it usually is with material from which this fever is developed.

It was, therefore, an obvious necessity that some other place should be selected where this class of patients could be treated without jeopardizing the health of a greater number of persons than would be absolutely required to minister to their wants.

Such an institution was found in the Municipal Hospital under the jurisdiction of the Board of Health.

There being but few patients at the time under treatment in the hospital, the entire building was thrown open for the reception of Relapsing Fever cases, the first of which were admitted on the 30th of April, and continuously thereafter, all who were removed from their homes for treatment were sent to this institution.

And it is, therefore, a matter of gratification to know that the disease became completely controllable when the entire management of the epidemic (for such it had then become) was assumed by your Board.

But a small proportion of cases (not $\frac{1}{10}$) occurred beyond the limits of what was known as the infected district, and the disease in a portion of this small percentage was directly traceable to the fact that the victims were in the habit of frequenting the vile haunts which infest the locality. If it were possible to trace the history of each case separately it would probably be found that a still smaller number than has been estimated, originated beyond the prescribed limits.

If this statement is not true to the extent claimed, the facts so far as ascertained are sufficiently important to indicate a means at least for the partial restriction of the disease.

The natural suggestion would be to isolate the district and remove the sick to a point where infection would cease to be pernicious. Such a course having been pursued, and the marked control under which the fever was kept after active interference was assumed, is a great experience gained considering the unprepared condition we were in for the efficient management of such an epidemic. Unprepared, not for want of means and

appliances, but from want of knowledge of the nature and character of the disease. The difficulties in the accomplishment of the results that were attained do not consist in the removal of the sick and their treatment in an isolated locality; they are to be found in the people themselves who are the first victims to this malady, their mode of living, their filthy and intemperate habits, their overcrowded houses and cellar tenements. The removal of the inmates of a dwelling, provided they are sick and willing to go, is not difficult, but to prevent the occupancy of the house by a fresh lot of these nomadic wretches requires the most unceasing vigilance.

It was from this cause, to a great extent, that the disease was kept alive so long. The records of the hospital show this to have been the case; from a single number in Alaska street, at regular intervals, a fresh batch of patients would arrive. I refer to this subject here for the reason that under present enactments your Board does not possess sufficient authority to efficiently cope with an epidemic which requires the indiscriminate removal of sick and well from so poisonous a locality as the "Alaska district" proved to be.

To speak to-day of the necessity of an active supervision by the Health Department over the crowded and filthy tenement houses of many sections of our city, is but to reiterate an urgent need that has long been apparent, and the absence of which seriously hampered the arrangements that it was found necessary to adopt for the extinguishment of Relapsing Fever in the stronghold that it had selected. The pernicious effects of overcrowding in badly ventilated houses and damp cellars is so fully recognized and universally accepted, that it seems superfluous even to state the fact. The remedy is at once suggested.

But little was known about Relapsing Fever in this country prior to the recent epidemic, but now, at least in this City, it has become a familiar disease to the majority of our physicians. As this report does not claim in any respect to be a treatise on the fever, it will be sufficient to enumerate a few of the marked peculiarities of the disease which may serve as diagnostic aids.

The attack is frequently sudden, the patient sometimes falling while at his usual vocation, as though he had received a blow on the head—intense headache being one of the first symptoms, followed by muscular and arthritic pains; obstinate, bilious vomiting; heavily furred tongue with red edges and a triangular patch of redness at the tip, and greatly increased heat of skin. The symptoms that are seldom absent in this stage being the headache, in the first instance, accompanied by the muscular and arthritic pains. I consider these two conditions as almost pathognomonic.

The patient generally remains without much change or amelioration in his symptoms for a period varying from four to seven days, usually about five days, when a decided crisis supervenes, ushered in by a profuse perspiration so copious as to thoroughly saturate the bed clothing; from this condition he emerges, after a few hours, completely changed; his pulse from being 140 drops down in some instances as low as 40, the temperature of the body from 106° falls as low as 92° ; the headache is gone, the tongue is moist and begins to clean from the edges, the appetite returns and the patient expresses himself as being entirely well but for the pains in the limbs, which pains gradually subside for a few days to return with the relapse, and seldom leave him until the disease is entirely eradicated.

During the period intervening between the crisis and the relapse, it is difficult to convince the patient that he has not entirely recovered; he cites his craving appetite, and his ability to eat with relish everything that is placed before him, while his constant demand is for meat and strong food. He is able to assist in many duties about the hospital, and imagines that he is unnecessarily detained for this purpose. But when the fourteenth day from the *date of attack* arrives, he begins to feel that he is not entirely through with the disease, his face becomes flushed, the headache returns, the muscular pains increase, the tongue gets dry and commences to coat, vomiting sets in, and in short the disease appears to repeat itself, though usually with an amelioration of all the symptoms.

The relapse is generally of shorter duration than the first attack, the fever not continuing longer in the majority of cases than three days, and frequently not more than twenty-four hours, terminating as in the first instance in a free perspiration, though not so profuse. Notwithstanding that the acute symptoms are milder in the relapse than in the first stage, the reaction is not so decided.

The patient complains of great debility, his appetite is not so good, the muscular and arthritic pains are more severe, he does not evince the same disposition to leave his bed, and nothing more is heard about undue detention in hospital. In the ordinary course of the disease the twenty-first day from the date of attack usually finds the patient entirely convalescent and completely recovered, provided a second relapse does not take place; and my experience at the hospital in the treatment of four hundred and ninety cases convinces me that under proper circumstances a second relapse is of very rare occurrence. Less than three per cent. of the entire number treated relapsed the second time, while but one patient escaped the relapse on the fourteenth day, but only to have it on the twenty-eighth day.

The uniformity and regularity with which the relapse occurs is one of the most remarkable features of the disease. I never knew it fail to make its appearance at the prescribed time except in the one instance above cited.

The symptoms and course of the disease, as I have attempted to give them from personal observation, are those of a well marked case of Relapsing Fever as found among that class of white patients ordinarily sent to a hospital.

This fever, like all diseases, has its complications, but with all the fever is none the less marked. Epistaxis occurs frequently during the first stage, more rarely in the second and third, but without apparently exerting any modifying influence.

When complicated with jaundice, as occasionally happens, the case assumes a more serious character, with a tendency after the relapse to degenerate into bilious dysentery. This class of cases is usually difficult to manage from the fact that they are gen-

erally the result of excessive dissipation. Infrequently the disease becomes typhoid in its tendency, but seldom in the early stages. By keeping in view the well-marked and distinctive features of the fever the complications are readily recognized. As it affects the white subject the disease is not a serious one, as the percentage of mortality will show, but when the patient is colored it assumes quite a different character. In its ordinary course it is the same in both classes, but in the majority of colored cases it presents symptoms of a totally different nature. Accompanying the initial fever, and in addition to the ordinary symptoms detailed above as occurring in the first stage, we find great epigastric tenderness and tumefaction extending to both hypochondriæ.

The slightest pressure over this region produces the most intense pain, and so agonizing and distressing is it that all other derangements are lost sight of or scarcely noticed by the patient.

These cases almost invariably prove fatal—generally in the first stage—and rarely reach the period of relapse. In a few cases this condition did not occur until the relapse, but with the same mortality. It constitutes the distinctive feature in the disease between the two classes, creating so wide a difference both in its nature and results as almost to lead to the belief that the two are not identical. The percentage of mortality in one class being 1.6 per cent., while in the other it is 25.4 per cent., a remarkable and unaccountable difference from the same cause. A post-mortem examination in these cases revealed congestion of the stomach, liver and lungs, with engorgement and enlargement of the spleen if death occurred early in the disease, but if the fatal termination was delayed for a period of eight or ten days the latter organ was found completely disintegrated.

I submit the following notes of post-mortem examinations in a few cases as illustrating the general condition of the viscera.

Lewis Gibson (colored), age 40; laborer; admitted to hospital July 25. Diagnosis, Relapsing Fever; died July 27. Autopsy July 28: Rigormortis well marked; the cavity of the thorax being opened, the pleura covering lungs anteriorly was found normal;

on the sides it was very adherent, to such an extent as to render the removal of the lungs quite difficult. Lungs—in size normal; on inspection looked bluish black—posteriorly quite black; little emphysema; on handling, felt soft, and on rolling between fingers and thumb, a number of millet seed bodies could be felt. Upon section a brownish fluid could be readily pressed out.

Heart—pericardium healthy; organ itself large, flabby; substance of heart wall dark, gelatinoid clot found on right side. Liver—normal; gall bladder filled. Stomach—much congested, particularly cardiac end; substance softened, containing a quantity of black semi-coagulated fluid not unlike feces; pyloric end extending into duodenum bathed with dark blood. Intestines—small, healthy, slight ulceration of lower portion of large. Spleen—very much enlarged and indurated; weight twenty-one and a half ounces. Kidneys—soft; cortical substance broken down.

History of this man, received from an acquaintance in ward, shows him to have been very intemperate.

John Brown (colored), age 27; huckster; admitted to hospital July 30; died August 4th. Diagnosis, Relapsing Fever. Autopsy, August 4th: Lungs—congested; firm pleuritic adhesions. Heart—gelatinoid clot in right side, otherwise normal. Spleen—increased in size, soft and disintegrated; impossible to remove it. Stomach—slightly congested and filled with a dark semi-coagulated liquid. Liver—congested. Kidneys—normal. Intestines—normal.

Walter Howell (colored), age 43; laborer; admitted to hospital May 24. Diagnosis, Relapsing Fever; died June 2d. Autopsy, June 2d: Extensive congestion of stomach; engorgement of liver, and complete disintegration of spleen—the organ being simply a mass of grumous blood.

John Stevens (colored), age 30; laborer; admitted to hospital May 30th. Diagnosis, Relapsing Fever; died June 2d. Autopsy, June 2d: Spleen—very much enlarged and indurated; weight seventeen ounces. Congestion of stomach and liver.

Joseph Tihman (colored), age 51; laborer; admitted to hos-

pital June 7th. Diagnosis, Relapsing Fever; died June 8th. Autopsy, June 8th: Spleen—engorged and very much softened; bilious infiltration and congestion of lungs; gelatinoid clot in right ventricle. In all the post-mortem examinations (colored), the same general conditions were observable as stated in the above selected cases, which have been taken indiscriminately and without reference to any theory in regard to the disease.

But one white patient died with symptoms at all analogous to those accompanying the fatal cases among the colored patients, and in this case no opportunity was given for a post-mortem examination, as the friends took charge of the body immediately for burial.

The disease, as it ordinarily manifests itself, requires but little treatment; usually in the first stages a single dose of cathartic medicine; the sulphate of magnesia, being well adapted to most cases, whether of constipation or diarrhœa, was used almost exclusively at the hospital. In not over half the cases treated did constipation exist, diarrhœa being quite as frequent a condition of the early stages.

After the exhibition of a cathartic, patients were usually placed upon a turpentine mixture every four hours, containing about four drops of the oil to each dose, this frequently alternating with a fever mixture until the period of crisis, when quinine in tonic doses was prescribed, and the patient allowed to drink freely of porter and ale.

Such was the general plan of treatment pursued in the ordinary cases, continuing the same course as in the beginning, when the relapse set in. The various complications were treated as they arose and as the symptoms presented themselves. In the colored, the acute inflammatory condition of the spleen was treated by wet cupping and blisters, with a slight mercurial exhibition in some instances, otherwise the treatment was much the same as in the white patients, except that quinine was more sparingly used.

All of which is respectfully submitted.

J. HOWARD TAYLOR,
Physician in Charge.

MUNICIPAL HOSPITAL,
PHILADELPHIA, *January, 1871.*

To the President and Members of the Board of Health.

GENTLEMEN:—I have the honor to submit the following statement of the working of the Municipal Hospital, from September 1st to December 31st, 1870, inclusive, viz.:

Number of patients in the Hospital September 1st,					
1870,	.	-	-	-	8
Admitted from September 1st to December 31st,					
1870, inclusive,		-	-	-	50
Total,	-	-	-	-	58
Discharged,	-	.	-	-	46
Died,	-	-	-	-	8
Eloped,	-	-	-	-	1
Total,	-	-	-	-	55
Remaining in the Hospital January 1st, 1871,	-				3

Of those admitted their diseases were as follows:

Relapsing fever,	-	-	-	-	35
Varioloid,	-	-	-	-	5
Variola,	-	-	-	-	2
Yellow fever,	-	-	-	-	2
Typhus fever,	-	-	-	-	1
Delirium Tremens,	-	-	-	-	1
Pleurisy,	-	-	-	-	1
Intermittent fever,	-	-	-	-	1
Enteritis,	-	-	-	-	1
Scarlatina,	-	-	-	-	1
					50

All of which is respectfully submitted.

W. M. WELCH,
Physician in Charge.

To the President and Members of the
Board of Health of Philadelphia.

GENTLEMEN:—I have the honor to respectfully submit a report of my duties and experience in connection with Relapsing Fever, which became epidemic in this City last spring, in the locality known as the Alaska street district.

The boundaries of this district may be said to extend from Lombard street south to Catharine street, and from Fifth street west to Eighth street. The most pestilential fever nests were located in the centre of this space on Alaska street, and the various courts and alleys opening on this street, between Sixth and Eighth streets, which locality is principally occupied by our most degraded population, and a resort of vagrants, tramps, and the debauched of the City.

It is impossible to give an accurate number of those who suffered with Relapsing Fever during this epidemic in this district, and throughout the entire City, that must ever remain a matter of speculation. I estimate that no less than five thousand cases occurred in Philadelphia, during the year ending September 1, 1870, with two hundred deaths. One hundred and fifty-two deaths from Relapsing Fever are on record in the office of the Register of your Board, for that period.

Before September 1, 1869, this fever was practically unknown to the profession in the United States, as it has heretofore been confined to the poorly fed and overcrowded of European cities, particularly those of Ireland, Scotland, and England. Only during the past year has it become one of the well-recognized contagious fevers of our large American cities.

The history of Philadelphia shows no instance of the occurrence of Relapsing Fever before September 1, 1869, except those cases reported by Meredith Clymer, M.D., in 1844, as imported from Ireland, in June of that year, in a Liverpool packet. Fifteen steerage passengers of this packet were treated in the Philadelphia Almshouse Hospital by Dr. Clymer, and several at the Penn Hospital, by Dr. Pepper, for Relapsing Fever, but there was no spreading of the disease.

Our medical literature, previous to the past year, was almost silent upon this subject, and it is not a matter of surprise that the epidemic obtained such headway, before being generally noticed by the profession, particularly, as the resemblance to our Southern fevers is so decided, and malarial fevers are of so frequent occurrence in cities and places where ten years ago they were almost unknown.

It is very much to be regretted that Section XXV., Act 1818. of our Health Laws, which requires every physician of Philadelphia to report to the Health Officer any patient laboring under a pestilential or contagious disease, "Measles excepted," which may come under his observation, is almost a dead letter, as few physicians ever make such reports.

An early knowledge of the prevalence of this fever by your Board would no doubt have saved considerable money to the City, and untold suffering, misery, and destitution to a large class of people little able to bear the deprivation, by sickness, of the results of their daily labors.

The origin of Relapsing Fever here, I feel confident, cannot be determined, as sporadic cases occurred at first in extreme and different sections of the City at the same time, and without any apparent communication.

Dr. Harris of New York, in the Medical Record March 1st, 1870, believes the fever was imported there, and did not arise *de novo*. My experience here leads me to an entirely different conclusion, as no case among the hundreds examined could I trace origin to any imported cause.

To all my inquiries, the same testimony has been given by many of those who treated the earliest cases. In the October number of American Journal of Medical Sciences for 1870, Dr. John S. Parry, in an article on "observation on relapsing fever," describes several cases occurring before January, 1870, in this City.

The first, that of a woman living in a narrow, illy ventilated and much overcrowded alley, running back from Quarry street, west from Bread street, which is between Second and Third streets, and Arch and Race streets.

Dr. Parry's first case was taken sick September 8th, almost two months before the earliest case occurred in New York, as reported by Dr. A. Clark in the New York Medical Record, March, 1870.

If imported, it will be observed that it appeared in both cities at about the same time, recognized here first, but as an epidemic much earlier in New York. This fact probably partly depends

upon the greater facilities the New York Board of Health have of becoming early acquainted with contagious diseases through their admirable system of medical sanitary inspection. The first death from Relapsing Fever, as recorded in the office of the Register, occurred in Frankford, February 26th; the second and third cases occurred in the Almshouse. For week ending March 26th, four deaths, all in the Almshouse, and three as follows: March 24th, at No. 1111 Charles street, Second Ward; March 28th, at 222 north Twenty-second street, Tenth Ward; March 30th, 2009 Summer street, Tenth Ward.

Week ending April 16th four deaths, three in the Almshouse, and one April 8th at 1124 Christian street, Third Ward.

We are too apt to look to importation as a cause of many diseases, and to entirely overlook the "epidemic atmosphere" and the condition of places and people, which renders them liable to epidemic diseases.

Relapsing Fever must have had some sporadic origin, as its history shows its entire disappearance for a period of ten to twelve years, and then suddenly spring up into epidemics.

If it could thus originate in European cities, why not here, when we must admit that our sanitary measures are, if anything, inferior to many cities abroad?

I firmly believe if we made as diligent search for the local causes of epidemics, and remove them, as we make and enforce laws against importation of diseases, we would render localities and cities untenable for epidemics.

Starvation, destitution, filth and overcrowding, separately considered, cannot be the cause; as of all examined no case was found to be at the point of starvation, and one family of five mutes were the only ones found who could be said to be almost at that depth of poverty.

Filth, of itself, was not a cause, as some of the filthiest families even in Alaska street district were entirely exempt; the same can be said of overcrowding. Where, however, the condition of overcrowding, filth, destitution, poor and irregular diet existed, Relapsing Fever found a home to spread from inmate

to inmate, and from room to room. The tramps and vagrants exemplify this class, and suffered accordingly.

It was so apparent that it was a noticeable fact, that when the epidemic was at its height, the accustomed street loungers were absent sick in hospital. When the epidemic was over, many of these who did not die, returned to their old accustomed corners on the pavement to sleep off the fumes of rum and tobacco.

I was told by several reliable persons, that my course of sending this class to hospital was creating considerable feeling among the low groggeries in the neighborhood, as they were losing all their customers.

The origin of the fever in this city must, therefore, as I have already stated, remain a matter of speculation. The cause of its becoming epidemic was most apparent. Overcrowding, filth, destitution, an impoverished and irregular diet, with intemperance, was the condition necessary to propagate this epidemic. This condition was most decided in this locality, and it is a subject of wonder that Relapsing Fever has been so long coming to the people of this district, and that Typhus has not made a permanent home there. For misery, degradation and filth, the locality is on a par with the worst localities of Dublin, Edinburgh and London, and a disgrace to a city which boasts of its charities and republican government.

Few have any idea of the wretchedness and degradation that prevailed among those who suffered with the fever in this district, and to what a fearful extent overcrowding is carried.

Cellars and apartments, not large enough for from two to five individuals comfortably, have been constantly occupied with from ten to twenty lodgers.

To show the destitution which prevailed among those sent to hospital, I am confident that out of 722 admitted to Almshouse and Municipal Hospital, twenty could not be found able to pay for their board.

The first notification of sickness of a contagious nature received by the Board of Health, and referred to me for investigation and

report, was in a letter received April 26th, without date, signed by a citizen, calling attention to a destitute colored man and woman at No. 11 Cross alley, north of St. Mary's street; these cases I reported as Remittent Fever in a Typhoid state, and recommended them to be sent to the Almshouse; they proved to be Relapsing Fever.

April 27th, by request of the Health Officer, Mr. Addicks, I visited Alaska street to see several cases reported by Drs. Barr and McShane, who had medical charge of the Bedford street mission dispensary. I found ten cases of fever in the cellars and alleys immediately surrounding the mission house; six others had been removed to the Almshouse Hospital. I visited the Almshouse to see the cases said to have been sent there, and found them under more favorable circumstances for examination and diagnosis. Dr. Rhoads, attending physician, stated that up to April 27th, there had been 160 cases of Relapsing Fever received in his wards, of which 90 acute cases were then under treatment.

In letter of April 28th, I stated these facts to your Board, showed that an epidemic of Relapsing Fever really existed in that district, and recommended the Municipal Hospital to be opened for the reception of Relapsing Fever patients, all cases to be sent there as fast as they should occur. The fever nests, after removal, to be whitewashed and to remain vacant for at least two weeks; all cellars in Alaska street and lodging cellars in the neighborhood to be closed indefinitely, after thorough purification; houses to be all whitewashed, cesspools to be cleaned, and a systematic daily policing of streets, washing of gutters, &c., &c., with the appointed additional medical help.

These radical measures were at once authorized by your Board, and persisted in until the fever ceased to be epidemic, about August 1st.

The following, taken from the monthly reports to your Board, for May, June and July, will show some of the work done by the Executive and Medical Officers of the Health Office, under the supervision of your Sanitary Committee, during this epidemic:

Number of visits of inspection made in the Alaska District, - - - - -	1,537
Number of visits of inspection made in other localities, - - - - -	290
Patients examined, - - - - -	930
Patients examined and prescribed for, - - - - -	348
" sent to Municipal Hospital, - - - - -	526
" " " " living in Alaska st., - - - - -	313
" " " " other localities, - - - - -	102
" " " " vagrants, - - - - -	61
" " " " unknown, - - - - -	50
Houses recommended to be cleaned, disinfected, &c., May and June, - - - - -	377
Houses recommended to be cleaned, disinfected, &c, closed, - - - - -	55
Cellars recommended to be cleaned, disinfected, &c., May, - - - - -	33
Rooms recommended to be cleaned, disinfected, &c., May, - - - - -	16
Privies, &c., cleaned, disinfected, &c., - - - - -	300

This was only part of the work accomplished in connection with this epidemic; if the whole amount of labor daily performed, such as cleaning streets and alleys, using disinfectants, white-washing houses and fences, vacating apartments, cleaning cess-pools, stable, &c., &c., could have been recorded in detail, the labor performed by the Health Officer, Physicians, Clerks and Inspectors, under the direction of the Board of Health, would show a much great enumeration than above.

There was one feature in connection with my duties in this locality, which afforded me no little satisfaction, the want of water supply there was very much needed, and it occurred to me to write to Dr. Swann, President of the Fountain Society, June 15th, stating the condition of the locality. He made an appeal through the churches, and before two or three weeks passed round, several fountains were in the neighborhood and constantly used, much to the comfort and benefit of many of the wanderers who haunt this district.

Dr. Swann deserves the thanks of the community. The symptoms, treatment, results and mortality, among the patients with Relapsing Fever sent to the hospital, I will leave to those who had the hospital care of the sick. In regard to nationality, the fever was almost exclusively confined to colored, and the Irish or their descendants.

During June and July, of 295 patients sent to the hospital, 63 were born in the United States, mostly of Irish parentage; 101 in Ireland, 3 in Germany, and 128 colored Americans. I cannot think that the Germans are to be more exempt from this fever than others under the same circumstances: First, because few Germans live in this locality; Second, because we all know that bread and tea diet so universal among the Irish, is not the main dependence of the Germans. The colored suffered more than any others, and with them the disease was unusually fatal. This fact cannot be accounted for, except that like the Irish, they appear to tolerate overcrowding, irregular and impoverished diet. The same condition of despondency, or complete giving up, was observed among the colored sick, as was noticed by all who had medical charge of colored troops during the rebellion, which fact, no doubt influenced the mortality.

In regard to the contagious nature of Relapsing Fever, I have every proof necessary to establish it beyond a doubt. For example:

Lodging house, 707 south Broad street, locality healthy; house filthy, to an extreme degree; third-story rooms occupied by nine grown persons; one 8 by 12 feet, the other 12 by 18 feet; wife nursed a brother sick with Relapsing Fever, who was brought from Wagner's alley, Alaska street; five contracted the disease after various periods of incubation, and all were finally sent to hospital. A healthy girl from the neighborhood visited these rooms while the sickness continued, contracted Relapsing Fever, was isolated, and no contagion followed.

No. 1121 Christian street was occupied by eighteen persons in six small rooms; locality healthy; house overcrowded and dirty; first case, was a young man who was in the habit of stay-

ing out from Saturday until Monday; came home one Monday with fever; it first went through his family of six, and then to other families, until thirteen had the disease. The last was a healthy woman, who had been hired to clean the house, July 5th, and on the 9th was sent to the hospital with fever, after four days' incubation.

No. 513 south Sixth street, was occupied in May by a family who had the fever and were sent to the hospital. House was cleaned, disinfected and closed. Without permission it was again rented to a clean, respectable and healthy family, all of whom contracted the fever and were sent to the hospital. Numerous other instances, and those of doctors, nurses, attendants and ambulance drivers, might be cited to prove its contagious properties here, but space will not permit.

The extent of the impoverishment, suffering, tardy convalescence, death and misery caused by this epidemic, must necessarily remain unwritten history. It is gratifying to know that much suffering and the duration of the epidemic was evidently shortened by the thorough system of isolation of patients, closing of infected houses, and other sanitary measures instituted and carried out by your Board.

The history of Relapsing Fever shows that its epidemics have generally lasted two or more years and the mortality has always been greater towards the end of such epidemics.

This fact, in connection with that of the present weekly record of deaths from Relapsing Fever in our midst, should be sufficient cause for the gravest apprehension of a similar outbreak during the coming spring. The intensely cold weather also makes overcrowding with no ventilation a necessity among the poor, which was the fruitful cause of the spreading of fever last year.

Typhus, the twin sister of Relapsing Fever, also is assuming an unpleasant prominence in our weekly record of deaths. If the lessons taught by this epidemic be properly applied, and the necessary legislation obtained to place and keep the City in a proper hygienic condition, all the money expended and suffering endured during its continuance will not have been in vain. I

hope therefore I may be excused if, in concluding this Report, I make such suggestions as appear to me necessary to prevent epidemics of Relapsing and Typhus Fever, in future stamp out certain diseases, and lessen our death rate.

All who understand the Health laws, most of which may have been no doubt very proper when made in 1818, must admit many defects of vital importance when compared with cities of this country as well as with those abroad.

I would earnestly recommend legislation, looking to a thorough codification and reform in our Health laws; some changes which appear most important to me, none of which, however, are original, as they are in operation in other and foreign cities, I enumerate as follows:

First. The absolute abolition of surface drainage and cess-pools.

Second. The satisfactory drainage and paving of all courts and alleys with flag stone instead of cobble.

Third. The improving of houses of the poor by insisting on the introduction of water, and gas, the cleansing of the common stair, and performance of necessary repairs.

Fourth. The diminution of overcrowding of the population by limiting the number of persons in each apartment; stating number of cubic feet of air necessary for each person, regulation of ventilation and water supply, removal of all tenements in a ruinous condition, and thorough surveillance of lodging houses and tenements by appropriate medical officers.

Fifth. Absolute prevention of cellars being used as lodging and sleeping apartments, except on special written permission of Board of Health.

Sixth. The construction of all sewers with necessary traps, etc., for their regulation in regard to their flushing out at stated intervals, and their construction in such a manner as will look to the future prevention of their contents flowing into the rivers, and ultimate utilization of the sewage.

Seventh. The daily collection of ashes and garbage in overcrowded localities, the weekly or semi-weekly collection in other

places, and strict enforcement of penalties against throwing refuse into the streets and cess-pools.

Eighth. The institution and regulation of public urinals.

Ninth. The thorough inspection of the City by competent medical assistants appointed by your Board, whose duty, in addition to weekly inspections, would be to vaccinate and prescribe for all the poor in their districts, and send contagious cases to municipal hospital, and others to almshouse, or such other hospital or colleges as may be designated, and such other necessary medical work as may be required.

Tenth. The regular sanitary inspection of cow stables, pig stys, horse stables, slaughter houses, etc., etc., and enforcement of necessary rules in regard to cleanliness and disposal of offal.

Eleventh. The prevention of erection of all houses or buildings where business prejudicial to health will be carried on, without first obtaining permission and license from the Board of Health.

Twelfth. The locating, license and surveillance of all houses of prostitution, the register of inmates and their inspection by medical officers, the proceeds to be applied solely towards their reform, and for the support of the sick of this class, and such other regulations as may lessen the evils and prevent diseases.

Thirteenth. The medical inspection of butchers' meats, fruit and vegetables, is also an object of much hygienic importance, although I have given it very little attention, and do not speak from personal experience.

The epidemic atmosphere during the past year was most apparent everywhere. With us it only required the overcrowded and destitute of Alaska street to produce Relapsing Fever—and the defective cess-pools and drainage of Swanson street and Krider's alley to cause Yellow Fever; thereby endangering many valuable lives in the community. Such and other additions to our Health laws would in a great measure render our City untenable for such epidemics in the future if properly enforced.

Surface drainage, the present system of cess-pools, and of paving gutters, courts, and alleys, will always be a great detriment to the health of the City, causing Cholera Infantum, with

its hundreds of victims annually, Typhoid, Typhus, and under certain conditions of atmosphere, Cholera and Yellow Fever.

Our poor should be better housed and not subject to the extortionate demands of landlords, without some adequate return in the way of necessary repairs, supply of water, and paving of yards. The inspection by competent medical officers of all such tenements and lodging houses would prevent overcrowding, and the inhabitants from sickness and epidemics.

These medical officers of Health could in addition be vaccine physicians, out-door physicians, and the recognized head to whom every poor person in distress in the district could apply and find relief.

I found a great want of proper medical advice among this class, and have seen several deaths no doubt from want of knowledge how to get destitute sick into the Almshouse for treatment. Some sick have been so sent "from post to pillar," in endeavoring to obtain admission, that I have finally sent them to the hospital for contagious diseases, to save them from starvation and death.

These things are little known outside of this class, and it is only by the appointment of efficient medical men, with the necessary compensation, having under your Board all the charge of inspecting localities, visiting, prescribing for, and sending the sick among the poor to the proper hospital, dispensary, or college, that this state of things can be avoided.

Why the poor should not have the benefit of special hospitals, suited to their respective cases, as is done in many European cities, will always be to me a matter of surprise. Such arrangements could be made with all the private hospitals, colleges, and charities, at no doubt less expense than at present; if not, it would remove the odium of the Almshouse among the worthy poor, and the old saying, "Rattle his bones over the stones, he is only a pauper nobody owns."

Your Board, through the daily or weekly report of such inspection, would become early acquainted with diseases apt to become epidemic, and could apply means for their prevention.

If such a system had been in successful operation here, I believe the expense of this epidemic might have been much lessened.

The daily collection of garbage and slop from the inhabitants of poor districts would be a source of great convenience, and of much sanitary importance, obviating the present necessity of throwing offal in the streets, in preference to waiting for the tardy rounds of the voluntary slop man.

If pig stys were under strict rules in regard to cleanliness, hogs, which are excellent scavengers, might be tolerated in many localities from which they are now banished every season.

Some of the sanitary defects of the City can only be remedied at great expense, and are for the future. The satisfactory disposal of the sewage will, before long, be a matter of necessity, as it has become in London, and all engineering of sewers should have this end in view, else in time our surroundings will be as unhealthy as Rome, and our rivers as offensive as the Liffy in Dublin, the Clyde at Glasgow, and the Thames in London.

The object of these recommendations is to deal with those obstacles to the well being of society which are apparent or lie on the surface. No one, however, can visit our poorer districts without being impressed with the close connection which exists between outward filth and inward depravity, and the ready facilities there presented for the origin and rapid growth of vice in all its forms.

It is gratifying to know that the improvement of the sanitary condition of localities will have a corresponding influence of raising the moral and social condition of these inhabitants.

Our philanthropists and missionaries have faithfully labored in these places, and have no doubt been surprised at the poverty of their results; we need not wonder at this when we reflect upon the disadvantage with which they have to contend.

The laborers are often so poorly lodged that to inhale the atmosphere of their houses is enough to produce a lethargy of all the moral and physical senses; so overcrowded in their sleeping places that the outward decencies of life cannot be maintained; home so cheerless and devoid of all comfort—to escape from

TABLE No. 1.

Table of Yellow Fever Cases, contracted at Sea and at the Lazaretto, from brig Home, from July 17th to August 26th, 1870, in the numerical order, &c., in which they occurred.

No.	NAME.	Age. Sex.	Nativity.	WHERE CONTRACTED.	Date of attack.	WHERE ATTENDED.	Days sick.	Black vomit.	Died.	Recovered.	Previous health.	DURATION OF EXPOSURE AND HOW EXPOSED.
1	J. P. Ellingsworth..... (cook and steward).	30 M	U. S.	At sea, while on brig Home.....	June 10.	At sea.....	.....	Yes.....	.....	Recovered.	Healthy.....	Unknown, while at Black River, Jamaica.
2	John Phillips, captain.....	46 M	England	" " " "	" 17.	" "	6to7	Yes.....	June 24.	.....	" " " "	" " " "
3	Stephen Bennett, pilot.....	58 M	U. S.	On brig Home while pilot.....	" 30.	Hotel cor. Del. av. and South street.....	4	Yes.....	July 5	.....	Hard drinker..	About five days, while pilot of brig Home.
4	Jos. J. Elliott, sailor.....	21 M	"	On brig Home at Quarantine.....	July 2.	Quarantine hospital.....	.....	No.....	.....	Recovered.	Healthy.....	" thirty " from leaving Ja. on brig Home.
5	George Griffiths, 2d mate.....	30 M	"	Quarantine.....	" 3.	Norfolk st., near Front, No. 46.....	3	Yes.....	July 6.	.....	" " " " " " " " " "	" " " " " " " " " "
6	Oliver Pierre, sailor.....	22 M	France..	511 Swanson, removed to 833 Swanson.....	" 11.	Municipal hospital, from July 19.....	.....	Yes.....	.....	Aug. 10....	" " " " " " " " " "	" " " " " " " " " "
7	Thos. Doggett, waterman.....	20 M	U. S.	On barge James Kirk, at gov. wh'f, Laz'o..	" 14.	Quarantine hospital, from July 19.....	7	Yes.....	July 22.	.....	" " " " " " " " " "	" four " after coming alongside brig Home.
8	Mrs. Jane Doggett.....	54 F	Ireland..	" " " " " "	" 15.	" " " " " "	6	Yes.....	" 23.	.....	" " " " " " " " " "	" " " " " " " " " "
9	Francis Hoolehan.....	16 M	U. S.	" " " " " "	" 15.	" " " " " "	5	No.....	.....	July 26....	" " " " " " " " " "	" " " " " " " " " "
10	W. H. Sylvester, stevedore.....	24 M	"	On brig Home while stevedore.....	" 17.	" " " " July 17.....	8	No.....	.....	" 25....	" " " " " " " " " "	" one " " brig Home came to wharf.
11	Ann Sharp, servant.....	26 F	"	Pepper's house, 140 yds. from gov. wharf..	" 22.	At Pepper's house and one mile distant....	7	No.....	July 29.	.....	" " " " " " " " " "	{ 6 days after brig Home came within 140 yards of house; was also at vessel.
12	Mrs. Borden.....	58 F	"	" " " " " "	" 22.	At Pepper's house	6	No.....	.....	July 28....	" " " " " " " " " "	" " " " " " " " " "
13	Mrs. Ennis.....	83 F	"	" " " " " "	" 23.	" " " " " "	6	Yes.....	July 28.	.....	Old, healthy...	7 " " " " " " " " " "
14	John Cavister.....	35 M	Ireland..	On barge Madison, at government wharf..	" 24.	Quarantine hospital.....	.....	Yes.....	.....	Aug. 20....	Healthy.....	8 days after coming alongside of "Home."
15	Jacob Pepper.....	52 M	U. S.	Pepper's house, 140 yds. from gov. wharf..	Aug. 1.	Pepper's house.....	6	Yes.....	Aug. 7.	.....	" " " " " " " " " "	17 " " "Home" came to 140 yds. of house.
16	Dr. W. S. Thompson..... (Lazaretto Physician).	52 M	"	At Quarantine grounds.....	" 2.	House of Lazaretto Physician in q'e gr'ds..	8	No.....	" 10.	.....	{ Somewhat broken from mal. fever.	{ 34 days from first visit to "Home;" 18 days from arrival at wharf; 31 days from visiting first patient, light case; 14 days from visiting se- vere cases; house 250 yds. from gov. wharf; 18 days after "Home" came to wharf; 4 days af- ter assisting at Pepper's house in attendance on Mrs. Ennis, and passing within 50 yards of brig Home.
17	Mrs. Kugler..... (wife of steward).	42 F	"	" " " hospital.....	" 2.	Steward's apartments, quarantine hos'l....	5	Yes.....	" 7.	.....	Healthy.....	19 days from arrival of "Home" to wharf; 30 days from nursing slight case of fever; 14 days from nursing severe cases of fever.
18	Fanny Gartrell, nurse.....	50 F	"	" " " " " "	" 3.	Nurses' " " " " " " ...	7+	Yes.....	" 10.	.....	" " " " " " " " " "	20 days from arrival of "Home" to within 250 yards of house.
19	Miss S. Thompson.....	12 F	"	" " " grounds.....	" 4.	House of Lazaretto Physician " " " " " "	No.....	.....	.....	Recovered.	" " " " " " " " " "	21 days from arrival of "Home" to within 250 yds.
20	Mrs. Thompson.....	40 F	"	At Quarantine.....	" 5.	" " " " at quarantine	No.....	.....	.....	" " " " " " " " " "	Broken health.	4 hours exposed at funeral of Mrs. Ennis, July 31.
21	Mrs. Clendenen.....	F	"	At Pepper's house.....	" 6.	One mile north of Lazaretto.....	12	Unknown.	Aug. 18.	.....	Healthy.....	{ 22 days from arrival of "Home" to wharf; was carpenter of station.
22	Charles Hancock.....	37 M	Ireland..	At Quarantine.....	" 6.	{ At 97 Morris st. until 5th day, when } removed to municipal hospital.	8	No.....	" 14	.....	" " " " " " " " " "	22 days from arrival of "Home" to wharf; was gardener at station.
23	William Dillmore.....	23 M	U. S.	" " " " " "	" 6.	Hospital of Lazaretto.....	7	Yes.....	" 13.	.....	{ Healthy, had mal. fever.	Same exposure as Dr. Thompson.
24	Robert Gartsides.....	50 M	"	" " " " " "	" 6.	House of quarantine master at Lazaretto..	6	No.....	" 12.	.....	{ Had mal. di. several w'ks.	13 days after coming to the Pepper House.
25	Mary Johnson.....	40 F	"	At Pepper's house.....	" 6.	Pepper's house.....	.....	No.....	.....	Recovered.	Delicate.....	22 days after "Home" came within 140 yards.
26	Mrs. Pepper.....	52 F	"	" " " " " "	" 6.	" " " " " " .....	.....	.....	.....	" " " " " " " " " "	" " " " " " " " " "	3 days exposed, from July 31, at Pepper House.
27	William Harrison.....	42 M	"	At Quarantine.....	" 8.	1130 O'Neill street, Kensington.....	4	.....	Aug. 12.	.....	Healthy.....	{ 10 days exposed, from July 19, as gardener at Lazaretto.
28	William Hess.....	26 M	"	" " " " " "	Aug. 12.	{ At home, 1028 Tasker street.	.....	No.....	.....	Recovered.	" " " " " " " " " "	6 days exposed, from August 7; was at Mrs. Kugler's funeral at Lazaretto.
29	Mary Riddle*.....	36 F	"	" " " " " "	" 16.	At home, Highland av., W. Philadelphia..	7	No.....	.....	Aug. 23....	" " " " " " " " " "	37 days from "Home" coming within 300 yds. Father was on the "Home" daily.
30	E. Miller*.....	12 F	"	Outside of Quarantine, south.....	" 20.	300 yards south of Quarantine.....	3	No.....	.....	" 31....	" " " " " " " " " "	" " " " " " " " " "
31	Mrs. Miller*.....	35 F	"	" " " " " "	" 21.	" " " " " "	3	No.....	.....	" 31....	" " " " " " " " " "	" " " " " " " " " "
32	B. F. Miller*.....	7 M	"	" " " " " "	" 22.	" " " " " "	3	No.....	.....	" 31....	" " " " " " " " " "	" " " " " " " " " "
33	D. W. C. McGuinn.....	39 M	Ireland..	Quarantine hospital.....	" 24.	Quarantine hospital.....	14	No.....	Sept. 8.	.....	{ Broken from s. pox, rel. fe.	{ 10 days from entering station as nurse.
34	W. F. Carpenter.....	50 M	England	" " " " " "	" 24.	" " " " " " .....	.....	No.....	.....	Sept. 24....	{ Old, fat & bro- ken in health	{ 19 " " " " " " " " " "
35	Dr. J. H. M. Forwood*.....	27 M	U. S.	" " " " " "	" 26.	" " " " " "	3	No.....	.....	Recovered.	Healthy.....	19 " " entering Lazaretto, as Physician in Charge, August 7.
36	Sarah, servant*.....	19 F	Ireland..	" " " " " "	" 26.	" " " " " " .....	.....	.....	.....	Sept. 1....	Had int. fever.	

*Case of very doubtful diagnosis.

†Black alvine discharge.

TABLE No. 2.

Table of Yellow Fever Cases contracted in Swanson street locality, in Philadelphia, from August 8th to September 8th, 1870, in the numerical order in which they occurred.

No.	NAME.	Age.	Sex.	Nativity.	WHERE CONTRACTED.	Date of attack.	WHERE ATTENDED.	Days sick.	Black vomit.	Died.	Recovered.	Previous health.	REMARKS.
1	Alexander Campbell.....	M			Unknown.....	Aug. 8.	1739 South street.....	4	No....	Aug. 12.		Healthy...	Was Night Inspector United States Customs.
2	John Lyon.....	44	M	Ireland..	Krider's court, Swanson street district....	" 10.	8 George place, near Krider's court.....	9	Yes....	" 19.		"	Was laborer employed unloading vessels.
3	Stephen Allen.....	35	M	N.Scotia	{ On board ship Carrolton, from Fal- mouth, N. S., lying at Reed st. wharf. }	" 18.	Pennsylvania Hospital.....	5		" 22.		"	Sailor; history unknown.
4	James Collins.....	60	M	U. S.	Rear of 738 Swanson st., or Krider's alley..	" 27.	Rear 738 Swanson street, Krider's alley....	6	No....	Sept. 2.		"	Laborer among shipping.
5	Charlotte Burmister.....	54	F.	Germa'y	736 Swanson street.....	" 30.	736 Swanson street.....	4	No....	" 3.		"	Lived in 1st floor room on Krider's alley.
6	Ellen Ryan.....	39	F.	Ireland.	744 " "	" 30.	744 " "	4½	Yes....	" 3.		"	Had abortion before death.
7	Kate Humner.....	58	F.	Germa'y	720 " "	Sept. 4.	720 " " and Municipal Hosp'l..	4	Yes....	" 8.		"	{ Lived filthily, and walked about house until 12 hours before death.
8	Ellen McNany.....	56	F.	Ireland.	511 Penn street.....	" 4.	511 Penn street.....	7	Yes....	" 11.		"	House clean.
9	Mary Glenn.....	56	F.	Ireland.	503 " "	" 4.	503 " "	7	Yes....		Sept. 15.	"	" dirty and overcrowded.
10	Mrs. Nolan.....	35	F.	Ireland.	517 " "	" 5.	517 " "	3	Yes....	Sept. 8.		"	
11	Robert Gorrell.....	35	M	Ireland.	734 Swanson street.....	" 6.	Back of 731 South Seventh street.....	6	Yes....	" 13.		"	Worked at trade of ship smith at 731 Swanson st.
12	Jos. M. King.....	29	M	U. S.	748 " "	" 6.	720 Swanson street.....	4	Yes....	" 10.		"	
13	Michael Dowlin.....	32	M	Ireland.	407 Penn "	" 6.	407 Penn street, back.....	8	No....		Sept. 24.	"	Locality filthy; house overcrowded.
14	Mary Ann Stanly.....	19	F.	U. S.	20 South "	" 6.	Municipal Hospital.....	20	†Yes....		" 26.	"	Worked in second-hand clothing establishment.
15	Patrick Flynn.....	32	M	Ireland.	Mead alley and Swanson street.....	" 6.	Cor. Mead alley and Swanson st., No. 5....	13	Yes....		" 19.	"	Taken sick in Delaware bay; waterman.
16	Mary Dowlin.....	40	F.	Ireland.	407 Penn street.....	" 7.	407 Penn street, back.....	8	No....	Sept. 15.		"	Locality filthy; house overcrowded.
17	Hannah McCann.....	35	F.	Ireland.	" " "	" 8.	" " " front.....	2½	Yes....	" 11.		"	" " " "

†Spat blood.

which they are exposed to the temptations of the many groggeries which infest such places, and which render it a heartless task to talk to such of "righteousness, temperance or judgment to come."

If we wish to raise our poor from degradation, to educate and make them useful citizens of this great Republic, we must first attack that which lies on the surface, for until their dwellings are rendered habitable, and they are taught outward cleanliness, we cannot expect their deeper natures to be stirred, or that they will become a class of citizens of sufficient morality or intelligence, with whom to entrust the destinies of our country or our republican institutions.

Very respectfully,

Your Obedient Servant,

H. EARNEST GOODMAN,

Jan. 1, 1871.

Port Physician.

PHILADELPHIA, Nov. 11, 1870.

CHARLES B. BARRETT, Esq :

Sec'y of Board of Health.

SIR:—In compliance with resolution of Board of Health of Sept. 30, 1870, I have the honor to make the following Report of all cases of Yellow Fever which have come under my observation during the past epidemic at the Lazaretto, and in the Swanson street district of the City.

The accompanying tables of cases, arranged in the order of occurrence, are—1st. Those who owe the origin of Yellow Fever to contact or communication with the brig "Home," at sea and at the Lazaretto; and 2d. Those who contracted the disease in the Swanson street locality, and are not traceable to any imported cause.

As my first introduction to this epidemic was at the Lazaretto, August 3d, after Dr. Thompson, Lazaretto Physician, had taken sick, most of the following facts pertaining to the history of the "Home" are derived from extracts of official letters of Dr.

Thompson to the Board of Health, and verbal statements of officers in connection with the Lazaretto.

The brig "Home," of 216 tons register, hailing from New York, arrived at the Lazaretto June 29, from Black River, Jamaica, with a cargo of logwood and thirteen bales or bundles of sail clippings, the refuse of a sail loft.

The sworn answers of the First Mate Sullivan, on the usual bill of inquiry, show that the "Home" had touched at Kingston, Jamaica, May 2; Port Spain, Trinidad, May 7; and left Black River, Jamaica, June 3, for Philadelphia. In answer to the question, "Have you had any sickness since the commencement of this voyage?" "Yes." "Are all on board in good health?" "Yes." "Did any sickness prevail in the harbors or on shore or at any of the said ports or places?" "No." "Have you a bill of health?" "No."

Dr. Thompson's inquiries and cross questioning of the mate and crew led to the fact that the captain died at sea on the 24th day of June, of a fever, and the steward suffered but recovered from the same disease. All the evidence shows that the mate and crew were aware of the nature of the disease, but in order to escape detention at Quarantine, and at the instigation of the mate, the crew combined to deceive the doctor by pleading ignorance; the mate assigning as the cause of the captain's death "heart disease," and trying to hide the sickness of the steward entirely. Dr. Thompson promptly decided that the fever was yellow fever, and at once ordered the vessel in Quarantine. She cast anchor about 400 yards opposite the landing or pier of the Lazaretto station. (See diagram I.)

The crew at sailing consisted of nine men, one colored boy and a passenger from Kingston, Ja. John Philips, captain; John Sullivan, first mate; George Griffiths, second mate; J. P. Ellingsworth, steward; Joseph G. Elliott, Oliver Pierre, John Perin, George Watson, Alexander Rodgers, crew; James Henry, boy; and passenger, name unknown.

Resolution of Board of Health, June 30th, directed brig "Home" to be cleaned, fumigated and disinfected, and the owners

Prevailing Winds from South West

DIAGRAM No. 1
OF THE
LAZARETTO STATION,
PEPPER'S HOUSE,
AND
POSITION OF THE BRIG "HOME,"
With location of Cases of
YELLOW FEVER,
From June 30th to Aug. 26th,
1870.

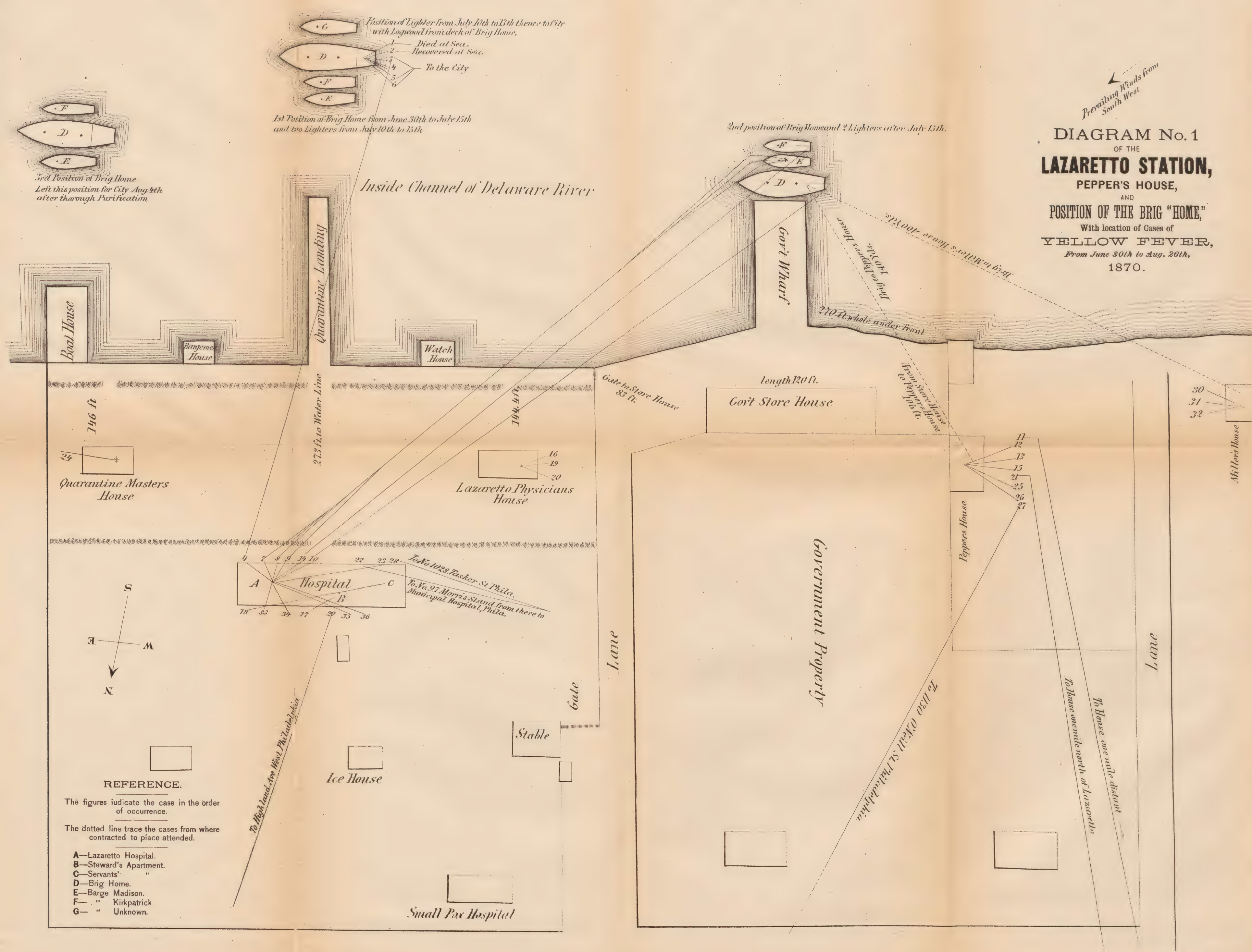


DIAGRAM No. 2,

Of the Infected District, and location of the Imported and Sporadic Cases of

YELLOW FEVER,

With the order in which they occurred, from June 30th to September 8th, 1870,

PHILADELPHIA.



REFERENCE.

- The * indicates the locality of the cases of Table No. 1.
- The Black Dot indicates the locality of the cases of Table No. 2.
- The Figures, in the order in which they occurred.
- The Black Dotted lines lead from one case to another of Table No. 1, in their numerical order.
- The Plain lines lead from one case to another of Table No. 2, in their numerical order.
- The date of each case corresponding with the numbers on Map may be found in the Tables.

notified to discharge cargo. June 30th, Stephen Bennett left the station with permission to proceed direct to the breakwater; feeling sick he returned to the City from Wilmington, and died at the Champion House July 5th. Second Mate Griffiths absconded at the same time, came to his home in Norfolk street and died July 6th. July 2d, Elliott, of the crew, was taken sick on brig "Home" with fever and removed to the hospital. July 7th, all remaining of crew and passenger, except Mate Sullivan and colored boy, with permission left the station for the City. Four of this number can be traced to sailors' boarding houses Nos. 511 and 833 Swanson street. One, the steward, shipped for Boston, and afterwards returned to the Lazaretto as nurse.

The whereabouts of one other and the passenger is still unknown. Of the six, Oliver Pierre only had yellow fever; he was first taken sick July 8th at 511 Swanson street, removed to 833, while "walking there had black vomit three times;" tried to get in Penn Hospital, but refused admittance because of nature of disease, and only admitted to the Municipal Hospital July 19th in the last stage of the fever. About the 11th, three barges or lighters, "James Kirkpatrick," "Madison," and one name unknown, came alongside the "Home," and the discharge of the cargo commenced. The force employed was one white and ten colored stevedores. July 13th, one lighter with part of the logwood off the deck of "Home"—the crew consisting of three white men and several colored stevedores—left without permission for the city. This lighter and cargo came to the logwood wharf on Windmill Island, where it remained six to eight weeks. None of the crew became sick, nor can any case be traced to this cargo. (See diagram II.)

The hatches of the "Home" were opened about the 13th or 14th July, and on 15th Dr. Thompson was prevailed upon to allow her to change to her second position to facilitate unloading at the Government wharf, and from this time the epidemic may be said to have fairly commenced. The thirteen bundles of rags represented by Dr. Thompson as "filthy," were purchased by the captain on private speculation at Black River

and stored in his cabin; as they were not on the manifest they were seized by the Custom House officer, and on 16th burned by order of the Board of Health.

July 17th, one of the colored stevedores became very sick and was removed to hospital and discharged, cured, on 25th.

July 19th, the discharge of the cargo was finished. Jane Doggett, her son Thomas and Hoolehan, all of the lighter "James Kirkpatrick," were admitted to the hospital "very sick," they had been sick three or four days, symptoms beginning about five days after coming alongside of the "Home," or about the time the hatches were opened. July 24th, John Cavister, captain of the lighter "Madison," was admitted to the hospital "very sick." For some cause he was bled freely by Dr. Thompson, had black vomit, convalesced slowly, and discharged, cured, August 20th. A boy 16 years of age, also of this barge, had fever of mild type but recovered without treatment. I ordered him into hospital August 3d, when he absconded and returned after several days perfectly well. Five out of six exposed on these two lighters had fever.

August 1st, the date of Dr. Thompson's last letter to the Board of Health, represents Cavister, case fourteen, the only patient in hospital convalescent. By request of Mr. Steel, Chairman of the Lazaretto Committee, I assumed the duties of Lazaretto physician August 3d, and was kindly relieved by Dr. J. H. Taylor during 5th and 6th, and permanently by Dr. Forwood on the 8th, after which I made daily visits to the station until 13th. I found Dr. Thompson exceedingly sick, taken very suddenly the evening before with chill. Had high fever, intense thirst and pain in head and back, vomiting everything he attempted to take; great epigastric uneasiness with slight tenderness, expression anxious, eyes bright, face suffused, and was extremely restless. Had not been well during the season, said was poisoned by malaria, caused by unhealthy condition of the station from spring overflow and intense hot weather. His wife and daughter were in similar condition. After a daily visit to the "Home," July 3d, was suddenly taken sick with chill,

followed by high fever; thought he was getting Yellow Fever and sent to the City for a physician; was well next day. He was treated by his brother, Dr. Thompson, and myself; it was palliative with quinine in large doses by suppository; nothing would remain on his stomach, and he died very yellow without black vomit August 10th.

Mrs. Kugler's case was very similar; patient, only more restless, and wandering from one room to another several times daily, to obtain relief. Her treatment was the same, and for the same cause was of little avail, as everything was rejected by the stomach. Had black vomit just before death—body very yellow.

The Pepper family, living 140 yards from the Government wharf, the second position of the "Home," were the first to contract the fever outside of those connected with the discharging of the "Home." Their condition on my first visit was truly lamentable. Mrs. Pepper stated (August 3d), that out of a family of thirteen, all had had a fever, except herself and sister; two had died, and Mr. Pepper was very ill. The children, the youngest about ten years, were the first taken sick, about July 20th. They had been to the wharf to see the brig while unloading, and Mate Sullivan and several of the stevedores had been to the house several times. They were prescribed for by Dr. Thompson, and after three or four days recovered.

I did not question Dr. Thompson, as to the character of their fever; I think he only considered it malarial, and their cases are not recorded in the list of Yellow Fever cases.

July 22d. Mrs. Borden, sister to Mrs. Pepper, and Ann Sharp, servant, became sick; Mrs. Borden recovered in six days. Ann Sharp, on the sixth day of her disease was removed to her home, about a mile from the station, and died next day, had decided symptoms, but no black vomit.

July 23d. Mrs. Ennis, mother of Mrs. Pepper, aged 83, was taken sick, had decided symptoms, severe, and died of black vomit on 28th. Her funeral was attended by several people besides her family. Mrs. Kugler come once during her sickness, had to pass within fifty yards of the "Home," and again, on

night of the death, came and assisted in preparing the body for burial.

Mrs. Clendening, living a mile from the Station, was exposed for four hours during the funeral, July 30th; took sick, August 6th, and died in twelve days. William Harrison, in delicate health, was also at this funeral; remained three days; took sick, 8th, and died after four days' sickness, in Kensington, Philadelphia.

Jacob Pepper, strong and in robust health, became sick, August 1st; symptoms not severe at the outset. I was sent for in night of August 6th; found him in collapse, spitting black vomit over his bed, pulseless, extremities cold, mind clear, and only complained of epigastric distress. He inquired as to his condition, and when I told him he could only live a few hours, was surprised as he did not feel so sick. He died three hours after. At the same visit I found Mrs. Johnson, who had suddenly taken sick with chill and intense pain in the head and back. Mrs. Pepper became sick in afternoon of same day; had been in delicate health for years; her symptoms were not so decided. Both recovered without black vomit, after a few days' sickness.

Mr. Gartside, Quarentine Master's case was one of considerable interest, he had been suffering for weeks "off and on," with a malarial diarrhoea. August 3d, I advised him to remain in the house and rest, and gave him quinine and morphia. He improved, and on the 5th resumed duty. August 6th, fever set in and he sent for Dr. Ulrich, who was attending in the Pepper family. I visited him daily, often twice daily, until he died, unprofessionally, however, as I was never consulted by Dr. Ulrich. He was lodged in a small room with southwest exposure, two windows, which were kept closed, and covered with eight or ten blankets. The air became very offensive; he died on the 12th with dry tongue, delirium of a low muttering character; had no black vomit, and stomach was only slightly sick at times during the attack. I feel confident this treatment was anything but beneficial. His wife, daughter and servant escaped the disease.

Fanny Gartrell, nurse at Lazeretto for thirteen years, was taken sick, July 23d, after unusual exertion, nursing the first six cases of Yellow Fever; next day was much better, and on the 25th returned to duty. August 3d, I found her suffering no pain, only complaining of uneasiness, as she said "tired out." August 4th, fever set in, and Dr. Taylor and I placed her under treatment; she continued a favorable case until day before death.

On the 8th, Dr. Forwood took charge of the case, applied additional number of blankets, stopped the treatment, and supported her strength by wine, &c. Had no black vomit, stomach was never very sick, death on 10th, preceded by black alvine evacuations.

Three of the Miller family, living about 300 yards southwest of second position of "Home," are reported by Drs. Forwood and Ulrich as cases of Yellow Fever, and are on my list No. 1; but from the testimony of Dr. J. H. Gihon, Quarantine Master, who visited them with Dr. Forwood, and who has had considerable experience with Yellow Fever, I am inclined to consider their diagnosis as extremely doubtful. The occurrence of their fever 50 days after arrival of "Home," 34 days after change to second position, and in the opposite direction from the prevailing wind, besides their appearance of health two days after leaving their beds, incline me to this opinion. The testimony of Mr. and Mrs. Miller shows the duration of sickness to have been from two to three days, during which time they were starved and sweated. The only communication with the "Home" was through the father, who is the U. S. Custom House officer at Lazaretto, and who visited her daily during unloading.

William Dillmore, case 23, had been suffering with Intermittent Fever, and on 14th day after last chill was suddenly taken with a very severe chill, followed by intense heat of skin, rapid pulse, and intense pain in head and back. This fever continued with slight remissions until death. Two days before he died he appeared convalescent, got out of bed, and sat at the open win-

dow, suddenly became worse, had black vomit, and died in collapse August 13th. He was under my treatment for 48 hours, afterwards under that of Dr. Forwood. A younger brother of Dillmore had a similar attack of Intermittent, only more broken down; I sent him to the City August 4th, and he recovered without any Yellow Fever symptoms.

Seven cases of those exposed to the influence of the "Home" had fever in various parts of the City; of these, cases 3, 5, 6 and 27 have already been mentioned.

Charles Hancock, employed as a carpenter at the Lazaretto from before arrival of the "Home" until August 4th, when he left for the City, was taken sick at his home, No. 97 Morris street, on the 6th, and removed to the Municipal Hospital on the 10th, died on 14th, with decided symptoms of Yellow Fever.

William Hess entered station July 19th, left July 29th; was brother-in-law of Gardener Dillmore; was taken sick at 1028 Tasker street about August 12th. Dr. Pinkney considered his disease Bilious Remittent until he told him where he had been, when he at once decided it was Yellow Fever. He recovered, and his wife and mother had a fever of a few days' duration. Dr. Pinkney considered it a similar fever of a mild type, but under other circumstances would have said it was a slight Remittent.

Mrs. Riddle entered station August 7th, left August 13th; attended funeral of Mrs. Kugler; nursed Dillmore until he died; was very healthy; became sick on 16th and recovered; had fever of a mild type; no black vomit; was attended by Dr. Adler, from whom I obtained history of her case.

Among the six nurses who came to the station after August 4th, McGuinn and Carpenter, cases 33 and 34, were the only ones who contracted Yellow Fever. McGuinn died after fourteen days' sickness, and Carpenter recovered. Neither should have been selected as nurse. McGuinn was much broken in health by an attack of Small Pox and Relapsing Fever contracted in June, while nursing at the Municipal Hospital. Carpenter was too old, fat, feeble, with arcus seniles well marked. Their cases were very severe; both assumed a Typhoid state. McGuinn had

black vomit and alvine evacuation before death, and both were very yellow. McGuinn was exposed about ten and Carpenter eighteen days before fever set in.

Dr. Forwood entered station August 8th as acting Lazaretto physician; taken suddenly sick on 26th with a chill, pains in head and limbs, vomiting followed by high fever, which lasted three days. His case, with that of Sarah, a servant girl, were the last to occur, since which time the station has been perfectly healthy.

In Surgeon General's report of Yellow Fever epidemic of 1867, Dr. Forwood is reported as having Yellow Fever from October 2d to 25th, at Alexandria, La.; this making his second attack.

Sarah, case 36, had Intermittent Fever preceding this attack.

The total population exposed to the influence of the brig Home, was about 103. This number includes the crews of "Home" and barges, stevedores, Miller and Pepper families, doctors, undertakers, visitors who staid over night, nurses, and those at the Lazaretto proper. Seventeen were colored, and eighty-six white. Of the colored, one had Yellow Fever of a mild type; of the white, 30 had genuine Yellow Fever, and 15 had fever of a mild type, lasting 3 to 4 days. Five of the 15 are reported on list as cases 31, 32, 33, 35 and 36, but thought to be involved in some doubt. Of the other 10 cases I have no record at all. Of the whites, $34\frac{3}{8}$ per cent. had Yellow Fever; blacks, $5\frac{1}{7}$; total per cent. of the sick during the epidemic, $45\frac{2}{5}$. The duration of the incubation cannot be accurately determined, except in case 21, where there was an exposure of three hours, July 30, and taken sick on the 6th August, six days. The most of the early cases had an incubation of 5 to 10 days. Those who remained near the "Home" day and night, after the hatches were opened, suffered the most. Out of six of the crews of the barges Kirkpatrick and Madison, five had fever and two died. The Pepper family, 13 in number, at 140 yards distant, all had fever. Dr. Thompson's family of four, and a colored servant, had three cases of Yellow Fever, at a distance from the "Home" of 140 yards.

Treatment was of little avail, except to palliate suffering, as all the severe cases, with the exception of Dr. Thompson's case, and Dr. Taylor's cases, 6 and 34, died; the slight cases recovered. Of the 31 genuine cases, 54½ per cent. died; of all, 36.44 died. Everything seemed combined to make up this sad history. The locality of the Lazaretto was decidedly malarious, increased by a spring overflow, and the most intensely hot weather—hotter than has been known for 81 years.

The infected vessel was old, rotten, saturated with filth, and hailing from a port where Yellow Fever was known to exist. Dr. Thompson declared that "language was inadequate to describe its condition." Another, who had been on quarantine duty for thirty years, and thirty more as a sailor, stated that it was the filthiest vessel he had ever seen.

The prevailing wind from southwest carried the poison continually toward the station; the thermometer stood at 90 degrees almost daily, during the discharge of the cargo, and what was more unfortunate, the vessel was allowed to come to the Government wharf, a distance of 140 yards from the Pepper house, and about the same from quarantine buildings. Everything that could be done to alleviate the sufferings of those afflicted was promptly done, and I am sure no unnecessary suffering was caused by their being treated at the Lazaretto. Everything I could think of for the relief or comfort of the sick was at once supplied as soon as asked for, by your able and efficient Chairman of the Lazaretto Committee. Much of the unnecessary excitement at Chester and surrounding country could have been obviated, if a proper professional spirit had prevailed among those who were called upon to give their services to the sick.

The second list of seventeen Yellow Fever cases, not traceable to any exotic cause, I am confident will include all the deaths, and, with few exceptions, all the cases occurring in the City, during what may be called the Swanson Street Epidemic of 1870.

The first case was Alexander Campbell, night inspector U. S. customs, who was taken sick Aug. 8, and died at 739 South street on the 12th. Upon inquiry of his family I find that his attack

was preceded by diarrhœa of several weeks' duration, that he had high fever, pain in the head and limbs, vomiting almost continually, and was "jaundiced." Dr. H. D. McLean, in letter of Oct. 24, states that he is fully of the opinion that his case was one of Yellow Fever. Through the kindness of the custom house officer I find that he was stationed at Windmill Island, (see diagram II) on brig M. L. B., loaded with logwood from Jamaica, from July 6 to 13. The deck load of logwood from brig Home evidently was at the same wharf on the night of July 13, as the barge was reported by Dr. Thompson as having left the Lazaretto without permission on that day. How near he was to this barge or lighter is unknown. From 14th to 31st he was on three vessels at Race and Callowhill street wharfs, except 20th and 22d, when he was in the room at custom house office. Aug. 1 to 8, was stationed at Shippen street wharf, in Swanson street locality, on board ships Tranquebar and Mary Cook, and schooner Cyrus Fessete, the latter only from an infected port (Cardenas). These vessels were perfectly clean, and none of their crews ever became sick. 9th, 10th, and 11th, he was reported sick, and on 12th died. He was at a tavern, corner of Davis wharf and Swanson streets frequently during the period from 1st to 9th, but cannot be traced to any place where one of the brig Home had been quartered or to any house where Yellow Fever after occurred. While he was at this wharf, August 4th, the brig Home came to the City and anchored $\frac{1}{2}$ mile to the windward of Shippen street wharf, east of Windmill Island, and remained over night. The "Home" at the time was considered perfectly clean by Drs. Thompson, Taylor, and myself—which opinion proved to be correct, as three watchmen from this date were placed on her, and all remained healthy after living on her for four to five weeks. The barge of logwood from the "Home" could not have been instrumental in producing the fever, as no case could be traced to it, nor did any of the crew of the barge contract fever during the transfer of cargo from the "Home." All my inquiries show no cause for the origin of disease in this case.

The next case was John Lyon, previously healthy, who was a waterman employed unloading vessels of the S. M. S. S. Co., whose vessels ply between New Orleans, Havana and Philadelphia. This was the first case reported to the Board of Health as a death from Yellow Fever in Swanson street locality. I inspected the premises after the funeral, and evidence of the wife and those who attended this case confirmed Dr. Burns' diagnosis. No case occurred in this house (No. 8 Finnour place) after, and no cause could be found for its origin.

The third case was Stephen Allen, a ship carpenter on board ship Carleton from Nova Scotia, which first went up the Schuylkill river, and then around to Reed street wharf, from which place he was taken to Pennsylvania Hospital August 18th, and died on 22d. He had been in port two weeks, and had done small jobs of carpenter work along the wharf during that time. His history previous to this voyage is unknown. Dr. Longstreth, the Resident Physician at Pennsylvania Hospital, stated that his disease was not recognized until two days before death, when he had black vomit and the more marked symptoms of Yellow Fever. "Post-mortem showed unmistakable signs of Yellow Fever; body was very yellow, liver yellow and filled with black blood, and points of black blood studded over mucus membrane of stomach."

By direction of the Board of Health, I visited Swanson street September 4th to investigate the case of Ellen Ryan, reported sick with Yellow Fever; found her dead. Also Charlotte Burmister at 733 Swanson street, both unmistakable cases of Yellow Fever. I called attention of the Board of Health to the filthy condition of Krider's alley, and stated that there had been four deaths from Yellow Fever in houses in this alley.

I also found at 720 case 7 sick in bed in a miserable, filthy, overcrowded room, also near Krider's alley, who stated that she was taken in the night with pains in the head and limbs, sick stomach and fever. I reported her case as Yellow Fever, and advised her to go to the hospital; she declined going, and remained about the room and sitting in doorway until evening of

the 7th, when she again took her bed ; August 8th was sent to the Municipal Hospital, where she died that night. Post-mortem appearance decidedly that of Yellow Fever. I saw this woman daily for four days, and after the first to the last visit she always declared she was well. The characteristic expression of anxiety, slight increased pulse and temperature, with peculiar color of skin, were the only symptoms (notwithstanding her asseverations) which led me to continue in my belief in my first diagnosis. This was unmistakably a "walking case of Yellow Fever." Two other cases occurred on Penn street the same day ; one on the 5th, and five on the 6th.

Robert Gorrell, case 11, was one of those occurring on the 6th. He was a shipsmith, worked next door to Krider's alley, No. 5 ; taken sick with chill, fever, pains all over, sick stomach, vomiting. I saw him August 12th at his home, back of 731 south Seventh street ; was in the last stage of Yellow Fever, having black vomit, blood oozing from mouth and nose, extremities cold and purple, mind clear, complained only of distress of stomach ; continued in this condition until next day, when he died.

His wife was reported by a physician to the Board of Health as a case of Yellow Fever. I visited her daily, twice in company with Dr. La Roche. She had no fever, only heavily furred tongue ; pulse 118, with great nervousness from anxiety and loss of sleep, which would occur after any prolonged excitement such as she suffered under. If this physician's report had been received as a fact, one case of personal contagion would surely have been established. One other case occurred on 7th and 8th, when the epidemic left us as suddenly as it came. I watched a number of other cases in the Swanson street district, but none of them turned out to be Yellow Fever. I also visited every house that showed signs of mourning, and made an investigation of cause of death. Physicians may have attended a few other cases which recovered, but I feel confident that I speak advisedly when I say the deaths to have been thirteen. Ten of the cases enumerated I visited personally. No children or col-

ored people were known to have the fever; nor did any instance occur of two of the same family having the disease, and only one instance of two in the same house. See diagram II.

All who contracted the fever, with only two exceptions, were in good health; nine were females and eight males. The population in the district exposed to the same influence was no doubt large, as most of the houses were occupied as sailor boarding houses, and other lodging houses. Cases 5, 6, 7, 8, 9, 10, 12, 13, 16 and 17 lived in overcrowded boarding houses; cases 6 and 12 in sailor boarding houses; all the others lived comfortably with their families.

The condition of this locality was unfavorable for health; the streets and gutters were exceedingly filthy; those on Swanson street rendered worse by the washings from all the small streets extending from Swanson to Front street. The air at night was often very offensive from a bone factory situated below Navy Yard, a long distance off. Krider's alley is a private alley owned by several individuals jointly, and by them should be kept in repair and clean. The paving was in holes, which were filled up with refuse of slops, &c., from about twelve small houses, which filth constantly putrified and festered in the sun. If this alley had been cleaned during the summer, it was impossible to keep it so, owing to the paving, as I have seen it almost as dirty a few hours after cleaning as before.

Penn street below Lombard, for two squares, was also filthy. That part where the cases 8, 9 and 10 occurred is much overcrowded, filled with lodging houses, the inmates of which throw their garbage, slops, and even human excrement in the gutters daily. People told me that the stench in this square from this cause was intolerable at night. Where cases 13, 16 and 17 occurred, the street was ordinarily clean. The house front was occupied by thirty people, and in the dirtiest, most overerowed condition. The one in the rear had about three families living in it, and in a very tidy condition for the locality. The common privy for all these people (between the two houses) was kept almost always full, sometimes overflowing the yard by reason of the tide

water. The stench from this source was unbearable. The cases taken sick had their windows opening over this offensive yard. Filthy and overflowing privies were very common in this district.

The weather during the summer was exceedingly hot. I find from the record kept at the Pennsylvania Hospital, the mean temperature for June, July and August, was 78.88° , the hottest known for eighty-one years. From the record kept at the Exchange, the mean temperature is almost 5° greater. The following is a copy of Pennsylvania Hospital record:

		June.	July.	August.
Mean temperature,	- -	77.21	80 61	78.82
Maximum, - - -	-	95.50	97.00	95.00
Minimum, - - -	-	61.00	61.00	61.00
Range, - - -	-	34.50	36.00	31.00

From the same source, I found the summer was preceded by a wet spring, causing overflow over much of the low lands below the City. The amount of rain fall was as follows:

January, 4.075; March, 4.036; May, 6.280; July, 3.947; February, 2.532; April, 5.605; June, 2.895; August, 5.115.

No case can be traced to contagion as the report shows ten (10) instances where patients with Yellow Fever, were treated in healthy localities with no sickness following; only one instance did sickness follow, that of Hess, case 28, and this sickness, on inquiry of a sister and brother of the family, was nothing like Yellow Fever.

I am unable, after the most careful investigation, to trace the epidemic to any exotic cause, and am compelled to look upon its origin as entirely sporadic.

Three of the crew of the "Home" lodged at a sailor boarding house, No. 833 Swanson street, one of whom, case 6, was sent from this house to the Municipal Hospital, July 19th, on the eighth day of the disease. He was first taken sick at 511 Swanson street, where another of the crew of the "Home" also boarded; not getting the proper attention, he removed after two days' sickness to 833, and remained there five days. He, therefore, had Yellow Fever in this locality eight days, but no case occurred

after in these houses (which were crowded sailor boarding houses), nor in any house in either square. The same can be said of Griffiths, case 5, and Pilot, case 3, who died in Norfolk street, and at the Champion House, corner of South street and Delaware avenue.

Mrs. Mason, washerwoman at the Lazaretto, left about August 1st, and went to her home in Pannes alley, No. 9, near Swanson street; no sickness followed in this locality.

The rest of the crew of the "Home" and the passenger cannot be traced, but in no instance where Yellow Fever occurred, had any of the crew, stevedores or attendants at Larazetto, been quartered or held any communication.

The barge of logwood, at Windmill Island, cannot have been an exciting cause of the epidemic, as it lay opposite Chestnut street wharf, almost a quarter of a mile north of the infected locality, with wind constantly from southwest. This logwood was from part of the deck load of the "Home," exposed to the air and sunshine during the voyage, and no case of sickness occurred among those who handled it.

The "Home," after thirty-seven days' quarantine, and the most thorough purification, was allowed, by mistake, to come to the City. She was returned the next day by order of the Board of Health. She came first to the west of Windmill Island, and remained over night east of it, and about opposite to Spruce street wharf. This was on the 4th of August, and the first case of Yellow Fever was on the 8th, four squares below this wharf. She never was within 800 or 1,000 yards of the infected locality, and her subsequent history proves that she could not have been a source of epidemic at this time and at so great a distance. If it had been otherwise, certainly one of the three or four who remained on her, after this date, would have contracted the fever.

We cannot look to communication with the shipping as a cause, as no case could be so traced; besides, nine of the cases were women, who never visited vessels while in port, nor were in the habit of leaving their homes.

I am fully of the opinion that this epidemic was caused by the state of the weather, its excessive continued heat, the general tendency to malarial fever in and out of the City, and more particularly to the neglected, filthy condition of Krider's alley, and gutters and privies in this locality.

The mortality among those taken sick was very great—thirteen out of seventeen died, or $76\frac{2}{17}$ per cent.

The treatment and nursing of most of the cases was very indifferent, some only sent for a physician when in collapse. The average duration of sickness of those who died was only five days.

The suddenness of the disappearance of Yellow Fever in this locality was a source of much congratulation, and was no doubt owing to the prompt application of sanitary measures adopted by the Board of Health. The streets were cleaned and gutters washed daily, privies were disinfected and cleaned; almost every house was whitewashed, the dead were promptly buried, and the sick, who could be removed, were sent to the Municipal Hospital. This work was so quietly done that few people knew of the epidemic until over, and the community will probably never know how narrowly they escaped the terrors of a general epidemic.

In closing this report, I feel bound to testify that all the evidence proves the able manner in which Dr. Thompson used the discretionary Quarantine power committed to him by the Health Laws of the State in detaining this unfortunate vessel at Quarantine. Had he listened to the ready stories of the mate or made a hasty examination of the crew, and recommended this vessel to proceed to the City next day after its arrival, with the epidemic condition known to exist here at the time, the sad story of 1793 or 1820 would surely have to be again told.

He did his duty wisely; simply a thankless professional duty, his action caused his death, but no doubt spared the citizens of Philadelphia from the horrors of an epidemic of Yellow Fever. The cheerful services of those five old faithful servants of the

Board, the bargemen, in working night and day without murmur or complaint, with the sick, dying and dead, in and outside of the station, also deserve the highest eulogy.

Very respectfully,

Your obedient servant,

H. EARNEST GOODMAN,

Port Physician.

LAZARETTO STATION, Nov. 26th, 1870.

CHARLES B. BARRETT, Esq.,

Sec'y Board of Health.

SIR :—In submitting a condensed statement of the events that occurred at the Lazaretto, following the arrival of the Brig "Home," I have restricted myself to a narrative of the facts as I have been able to ascertain them, and such unquestionable inferences as may be deduced therefrom. I have also confined myself to the recorded cases at the hospital, such as occurred within the quarantine limits, and those at Mr. Pepper's, immediately adjoining. This makes but a small proportion out of the whole number.

Those cases occurring in the City, and outside, though contiguous to the quarantine limits, but directly traceable to the Brig "Home," have been carefully collected by Dr. Goodman, the Port Physician, and will, I am informed, be fully reported.

The records at the station, of events as they took place, are very meagre, consequently some difficulty has been experienced in obtaining correct information, as the principal facts have been procured from parole testimony exclusively, I can only add that I have sought different sources for the same end.

Having no theories to advance, and no speculations to indulge in, I wish to be distinctly understood, at the outset, as disclaiming all thought of reflecting upon any one the responsibility for the deplorable condition of this place, during the quarantine

season just closed. It is essential for our protection hereafter, it is in the interests of the future, and not in the interest of the past, that these statements should be fairly and impartially made, that we may guard against a repetition, or at least avoid what may appear to be a cause of such fearful mortality. If nothing more is accomplished, much will have been already done.

Nothing worthy of special note occurred at the Lazaretto prior to the arrival of the Brig "Home," on the 29th of June, from Black River, Jamaica, with a cargo of logwood. The captain having died on the passage (about the 24th of June), the circumstance was considered a suspicious one, notwithstanding the statement of the mate who was in charge that no such disease as Yellow Fever had prevailed on board the vessel. The brig was detained and anchored in the inner channel in front of the Lazaretto in the position designated on the accompanying chart.—Immediately after the vessel had been brought to an anchor, the Pilot, Stephen Bennett, asked for and obtained permission from the Lazaretto Physician (as is usual in such cases), to proceed to the Capes of the Delaware. Instead of complying with this permission, and obeying an explicit provision of the law, he proceeded to the City of Philadelphia, where he was soon after taken sick, and died with black vomit on the fifth of July. Accompanying the Pilot, the Second Mate, George Griffiths, absented himself from the vessel without leave, and proceeded to the City, where he was taken sick and died on the sixth of July with well marked symptoms of Yellow Fever.

The vessel being in a very filthy condition on her arrival, and the captain having died under circumstances which rendered the suspicion of the existence of Yellow Fever almost a certainty, the Board of Health, by resolution dated July 1st, ordered the brig to be discharged of her cargo into lighters at the Lazaretto, in order that she might be thoroughly cleansed, fumigated and whitewashed, before permitting her to proceed to the City. Accordingly three barges were sent to the station for the purpose of receiving the cargo, and work was commenced while the vessel remained in the stream in the position first des-

ignated. The first barge loaded, received the principal part of the deck load of the brig, and proceeded at once to discharge the same on Windmill Island, opposite the City. During the time of the loading of this barge the facilities of access to the shore were restricted, and sometimes difficult to be accomplished, it being a rule of the Board of Health and the established custom of the place, to interdict all communication between infected vessels and the shore, except for the purpose of obtaining supplies from the steward, or on business specially connected with the detained vessel.

Apparently for the reason that it was difficult to discharge the cargo in the stream, where it was impossible to command the use of a horse for hoisting purposes, but really for the reason, as the sequel will show, to procure unrestricted intercourse with the shore, permission was granted to the mate and stevedores, by the Lazaretto Physician (Dr. Thompson), to haul the brig to the United States wharf, where the discharge of her cargo into lighters was completed. By reference to the chart, it will be observed that the United States wharf is without the quarantine enclosure, although supposed to be placed under quarantine restrictions during the prevalence of sickness, or the presence of infected vessels at the station.

In the present instance, the result was to give those employed in discharging the vessel the unrestricted freedom of the shore, including frequent surreptitious visits to Philadelphia, while to the citizens of the neighborhood it gave an object of interest which claimed their unemployed attention, and a curiosity which required many visits to satisfy.

But to recur, without stopping to discuss the vexed question of contagion, whether personal or otherwise, the facts are that the mate and stevedores were in the habit of visiting many times daily the hotel kept by Mr. Pepper, immediately adjoining the wharf, as well as one more remote, situated about one hundred and fifty yards west of Mr. Pepper's, on the river bank.

Setting aside the possible danger which may have accrued to those persons and places visited by the mate, stevedores and

others connected with the brig, the additional fact remains that many persons from the neighborhood visited and went on board the vessel during the time her cargo was being discharged at the end of the wharf. What proportion of the cases of Yellow Fever that occurred as directly traceable to the proximity of the Brig "Home," are included in the number who visited the vessel or the wharf during the time the cargo was being discharged, it is impossible to ascertain with certainty. It has been stated to me that Mr. Pepper was not on board the vessel, but that he was on the wharf frequently is not denied.

Mrs. Ennis, Mr. Pepper's mother-in-law and residing with him, was never known to have been on the wharf while the brig was discharging, yet she was one of the first victims among those not directly connected with the vessel. This fact commands special attention, when the relative position of Mr. Pepper's house is observed.

The "Home" remained at the wharf discharging about six days, and during that time the prevailing wind was from the southwest, thereby blowing from the infected spot directly across the quarantine grounds and escaping Mr. Pepper's house entirely.

I cannot ascertain that during the period embraced in the discharge of the vessel that the wind blew from the east, or in a direction that would include the vessel in a line towards Mr. Pepper's, until within a day or two prior to the vessel's leaving the wharf after the cargo had been discharged. Yet the disease manifested itself at Mr. Pepper's in a most virulent form before it did at the residence of the Lazaretto Physician, equally near with the other and in the direct line of the prevailing wind. Two deaths had occurred at Mr. Pepper's before Dr. Thompson was taken sick. That those who were connected with the barges receiving the cargo should be early affected is not a matter of surprise, as they were living all the time within the immediate influence of the poison; yet I cannot learn that any of those having in charge the first barge that received a cargo in the stream and proceeded directly to the City contracted the dis-

case. There may be no important significance in this fact, still it remains.

The circumstances attending the transfer of that portion of the cargo either unknown or unnoted may have been different, or something may have been due to the fact that it was the deck load that was removed; yet the hatches of the vessel were opened immediately on her arrival at quarantine, and kept open continuously during the whole time that she remained.

The hospital records show the first case admitted to have been a sailor from the Brig "Home," named Elliott, who was received for treatment July 2d, and discharged recovered July 6th. The second case, a colored stevedore admitted July 17th, and discharged recovered July 25th. The third case, Mrs. Jane Doggett, wife of the captain of the second barge, was admitted July 19th and died July 23d. This woman's duties confined her exclusively to the barge, where she acted in the capacity of cook. The fourth case, Thomas Doggett, Jr., son of the captain of the barge, was admitted the same day as his mother and died July 22d. This man was employed on the wharf in driving the mules used for hoisting purposes, and was in no way occupied on board the brig in removing, or on the barge in receiving cargo. The fifth case, Francis Hoolehan, was admitted the same day as the above (July 19th), and discharged recovered July 26th. He was employed on Captain Doggett's barge, and assisted in receiving and storing cargo.

It will be observed that Mrs. Doggett, son, and Hoolehan were taken sick and received into the hospital on the same day. Mrs. Doggett's duties were on the barge to the windward of the brig; the son's duties were on the wharf at the leeward of the brig, while Hoolehan was occupied at the very centre of infection. The sixth case, John Cavister, the captain of the remaining barge, was admitted to hospital July 24th, and discharged recovered August 20th.

These cases include all directly connected with the Brig "Home" and barges, who were admitted into the Lazaretto Hospital for treatment. The next cases in the order of sequence

occurred at Mr. Pepper's, and, continuing the numerical arrangement, the seventh was Mrs. Burden, who was taken sick July 21st, began to convalesce July 25th, and eventually recovered. The eighth case, Ann Sharp, in the employ of Mr. Pepper, was taken sick July 21st and died July 29th. The ninth case, Mrs. Ennis, Mr. Pepper's mother-in-law, was taken sick July 23d and died July 28th. The tenth case, Mr. Pepper, was taken sick July 31st and died August 7th.

These four cases had occurred, and two had died, before the disease manifested itself within the quarantine grounds

The eleventh case and the first within the Lazaretto proper, was Mrs. Kugler, wife of the steward, who was taken sick August 1st and died August 6th. And here a passing notice is due Zealous in good works, kind, attentive and self-sacrificing, where sickness and trouble existed, she gave her time and services freely both day and night, as well to her afflicted neighbors as to the wants of the patients in the hospital; and it may be truly said of her that she was always found at the post of danger, never shrinking from any duty wherein it was possible to relieve suffering, or to assist at the last sad rites preceding sepulture. Her many excellent qualities and unvarying kindness will long be held in grateful remembrance by those whose privilege it was to know her, under circumstances which called forth the exercise of those virtues which so pre-eminently marked her life.

The twelfth case, Dr. Thompson, the Lazaretto physician, was taken sick on second of August and died on the tenth of the same month. Then followed on the third of August the thirteenth case, Fannie Gartrell, an old and faithful nurse, who had served in that capacity for twelve years, bringing to the discharge of her duties a conscientiousness which secured to her the confidence of the various medical officers at the station, and the uninterrupted approval of the Board of Health; she died on the tenth of August. Then follows in the order of sequence Dr. Thompson's daughter, taken sick on the fourth, and Mrs. Thompson (wife), taken sick on the fifth of August, both of whom recovered, making the fourteenth and fifteenth cases.

William Dillmore, gardener for Mr. Kugler, making the sixteenth case, was taken sick on the sixth and died on the thirteenth of August.

Robert Gartside (Quarantine Master), being the seventeenth case, was taken sick on the sixth and died on the twelfth of August.

This gentleman had been suffering for some time prior to the sixth of August with an intermittent attack of Bilious Dysentery, decidedly hæmorrhagic in its character, whereby his system had become so enfeebled as to render him an easy victim to the more fatal malady to which he rapidly succumbed. No new cases are recorded until the twenty-fourth of August, an interval of nineteen days, at which time D. W. C. McGuinn, who had been employed to nurse Mr. Gartside, was taken sick, and died on the eighth of September.

Following McGuinn, and making the nineteenth and last recorded case, was William F. Carpenter, who had been employed as a temporary nurse, and assisted somewhat during the sickness of Dillmore. He was taken sick on the twenty-sixth of August, and discharged recovered on the twenty-fourth of September. This ends the history of recorded cases. There are other cases enumerated, about which some doubt has been expressed as to their genuineness. I will, however, include them in the list without expressing an opinion as to whether they were Yellow Fever or not. I refer particularly to two servant girls in the employ of Mr. Kugler, who were taken sick towards the latter part of July and were slightly indisposed for a few days; one of them subsequently, by imprudent exposure, contracted a severe cold, which confined her to her room for an additional period. Dr. J. F. M. Forwood, who had been employed by the Board of Health temporarily, to take charge of the station, was taken sick about the twenty-seventh of August and remained a patient until the fifth of September.

Mrs. Pepper, Mrs. Burden's daughter, and a relative, Mrs. Johnson, were all sick during the month of August, and all recovered.

Mrs. Clendenning, a friend of Mrs. Pepper's, and who attended the funeral of Mrs. Ennis and was present in the house about three hours on that day, being her only visit, was taken sick and died at her residence, about two miles from the Lazaretto.

All the cases that I have included thus far, have been carefully traced and elaborated by one than whom there is no one more competent, and it would be a work of supererogation in me to attempt to amplify a subject that is receiving the careful thought of Dr. La Roche, who is everywhere recognized as authority on Yellow Fever.

The cases occurring in the City come within the legitimate province of the Port Physician, and have been fully reported.

It therefore only remains for me to add what appears to be an irresistible conclusion, if the preceding facts have been carefully stated, that the near proximity of the Brig "Home," caused by bringing her to the United States wharf, produced the fatal sickness that afflicted the residents at the Lazaretto, including Mr. Pepper's, immediately adjoining. It will be observed that the first position of the Brig "Home" placed that vessel at least three-fourths of a mile from any point within the Lazaretto. It may therefore become a question at what distance from the infected spot the poison ceases to be active, but it cannot be doubted that the intensity of the poisonous influence decreases as the distance increases. If therefore there was only a partial immunity in the first instance, to what a frightful extent the disease was intensified by the transfer of the vessel to the second position, is evidenced by the fearful mortality that occurred.

It is scarcely within the province of credibility to suppose that the same results would have taken place, had the discharge of the brig been completed as it was commenced, when the first barge received its cargo. We have the positive fact in the first instance, that no sickness occurred; in the second we have the report that is herewith submitted; it becomes the difference between immunity and decimation, even greater,—I might almost add destruction.

The statement that it was necessary to haul the brig to the wharf in order to discharge her cargo falls to the ground, when it is known that all vessels are loaded in West India ports from lighters. Not only the cargo of logwood, which is comparatively easy to handle, but the heavier cargoes of sugar and molasses by hogsheads are so transferred. Much has been said about filthy rags, but I have been assured by those who handled the lot (consisting of two bags), that they were composed entirely of clean canvas, the clippings of a sail loft in Kingston, Jamaica.

There is one other point of interest connected with the second position of the brig, which may be worthy of consideration. It will be observed, by reference to the chart, that there are about three acres of marsh directly fronting the Lazaretto and extending to the United States wharf. This marsh, covered with rank vegetation, is entirely exposed during low water. Its emanations are known to be malarial, and the effluvia arising therefrom very apparent, as I have frequently observed after the recession of a tide during the hot days of August and September. To what extent this malarial presence intensified the yellow fever poison I cannot presume to say, but the recognized conditions favorable to the development of the disease certainly existed in the locality to some extent. We had long-continued high temperature acting upon decaying matter, and the spark may have been added when the Brig "Home" touched the wharf. I do not say that Yellow Fever would not have broken out on shore had the brig remained in the first position, but surely the noxious influence would have been very much diluted in passing over an open river three-fourths of a mile to land.

Some prominence has been given, by certain parties, to an impression erroneously received, that the hospital department at the station was deficient in supplies and not in a condition to properly minister to the wants of the patients that were admitted for treatment. I can only state that if such was at any time the case, the Health Department of the City was not responsible for the deficiency. Promptness is a characteristic for which the

efficient chairman of the Lazaretto Committee is justly esteemed, and any requisition for needed supplies would have commanded his immediate attention. It is therefore a weak subterfuge to attempt to shift the responsibility from where it properly belongs. The question of supplies belongs to the physician.

In conclusion I will add, that two suggestions naturally present themselves as a means, to some extent, of prevention in the future.

First.—To avoid the close proximity of an infected vessel to the shore.

Second.—To neutralize the malarial condition of the marsh fronting the station.

Respectfully submitted,

J. HOWARD TAYLOR,
Lazaretto Physician.

No. 1—Hospital.

" 2—Residence of Physician.

" 3— " " Quarantine Master.

" 4— " " Mr. Pepper.

" 5—U. S. Wharf.

" 6— " Store House.

" 7—Lazaretto Wharf.

" 8—Boat House.

" 9— " "

" 10—Bargemen's Quarters.

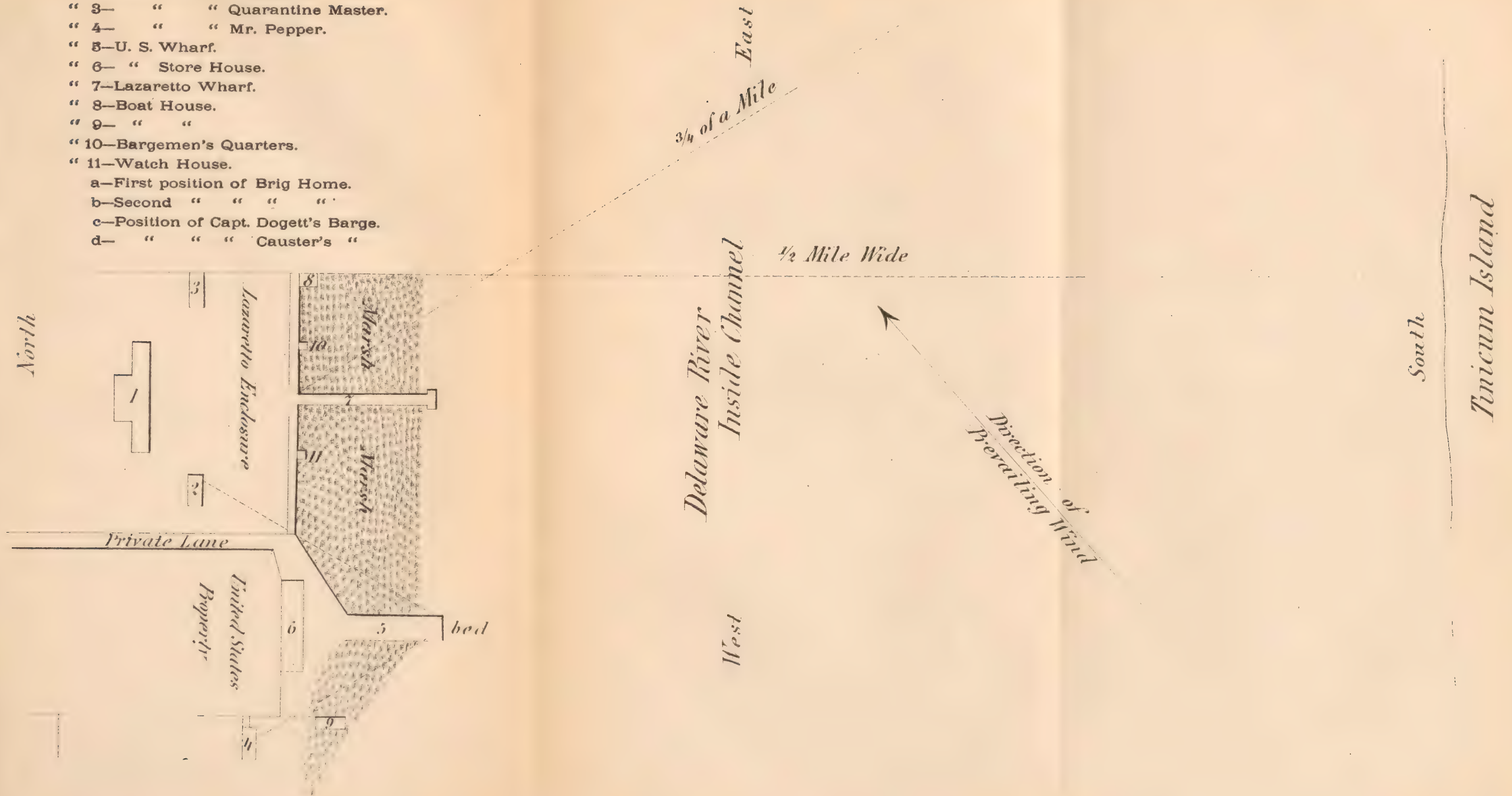
" 11—Watch House.

a—First position of Brig Home.

b—Second " " " "

c—Position of Capt. Dogett's Barge.

d— " " " Causter's "



HEALTH OFFICER'S ANNUAL REPORT

OF

Births, Marriages and Deaths, 1870.

Registration Department, Health Office,
PHILADELPHIA, *January, 1871.*

To the President and Members
of the Board of Health.

GENTLEMEN :—In conformity with the provisions of Section 1 of the Act of Assembly, approved March 8th, 1860, I hereby report, through you, to City Councils, the following abstracts from the records on file in this department for the year ending December 31st, 1870.

During the past year we received and placed on record six thousand four hundred and twenty-one (6,421) marriages, seventeen thousand one hundred and ninety-four (17,194) births, and sixteen thousand seven hundred and fifty (16,750) deaths, making a sum total of forty thousand three hundred and sixty-five (40,365); and while our birth table shows a small natural increase of the population, yet we feel confident that many practitioners of midwifery do not appreciate the importance of registering their cases, and in many instances incorrect returns are made to this department, and until these parties are compelled by law to conform to the requirements of the Act of Assembly,

or more stringent laws are passed, it will be impossible to make our tables of any great value for statistical purposes.

Much credit is due to the clergymen of all denominations for the interest they have manifested, and in very few exceptions the aldermen have generally complied with the law, thus making this branch of the department as near perfect as can be attained under the present law.

By reference to our mortuary tables, it will be observed that the general sanitary condition of our City was not as favorable as the preceding year, the increase amounting to one thousand nine hundred and sixty-four, or 13.20 per cent.; this increase was not attributed to any special cause, as it was equally divided among the various diseases, and no one disease of such severity as to cause any alarm; and notwithstanding this large bill of mortality, we are satisfied that the health of our City will compare more favorably than any of the large Cities. This statement is made to disabuse the minds of those who are disposed to attribute the augmentation of deaths to the prevalence of any epidemic in our City during the year. 'Tis true we had relapsing fever in the early part of the year, and continued until midsummer, and notwithstanding it was the subject of much unnecessary excitement, yet the mortality only amounted to one hundred and sixty-two (162), and yet very little was said of that much-dreaded disease, scarlet fever, which amounted to nine hundred and fifty-six (956), the highest that we have had since the year 1861.

BIRTHS.

The number of births registered during the year was seventeen thousand one hundred and ninety-four (17,194), an increase over the previous year of two hundred and thirty-four (234), or 1.37 per cent.

The number of male births was nine thousand one hundred and thirty-four (9,134), an increase over the previous year of two hundred and seventy three (273), or 3.07 per cent.; the female births during the year amounted to eight thousand and sixty (8,060), a decrease from the previous year of thirty-nine (39).

The following table will show the number of births in each month, the number of colored births, still-births, twins and triplets:

TABLE I.—BIRTHS.

1870. MONTHS.	Total.	BIRTHS.		BLACK.		STILL-BORN.		Twins.	Triplets.
		M.	F.	M.	F.	M.	.		
January	1,560	849	711	11	10	43	27	12	
February	1,376	739	637	4	3	43	32	12	
March	1,368	697	661	4	2	54	33	16	1
April	1,262	667	595	6	3	34	20	15	
May	1,301	686	615	5	4	58	32	8	
June	1,332	705	627	6	3	41	30	11	
July	1,420	732	688	3	4	31	27	10	1
August	1,528	802	726	7	2	46	32	11	
September	1,504	795	709	8	2	33	16	7	
October	1,528	819	709	2	6	31	25	15	
November	1,416	772	644	3	6	39	26	15	1
December	1,609	871	738	3	4	36	33	8	
Total	17,194	9,134	8,060	62	49	489	333	140	3

Twin-births.—The number of twin-births amounted to one hundred and forty (140), an increase over the previous year of thirty-eight (38).

Triplets.—During the year three sets of triplets were reported, one set in the month of March, one in July, and one in November.

Colored Births.—The number of colored births registered during the year amounted to one hundred and eleven (111), a decrease from the previous year of thirty-two (32).

Still-births.—We have registered eight hundred and twenty-two (822) still births; four hundred and eighty-nine (489) were males, and three hundred and thirty-three (333) were females.

The number of births in each quarter of the year was as follows:

First quarter, ending March 31st,	4,294 = 24.97 per cent.
Second " " June 30th,	3,895 = 22.66 "
Third " " Sept. 30th,	4,452 = 25.89 "
Fourth " " Dec. 31st,	4,553 = 26.48 "
Total, - - -	<u>17,194 = 100.</u> "

The following table presents the births in each ward during the year 1870:

TABLE II.

BIRTHS IN EACH WARD, 1870.		
First.....601	Eleventh.....518	Twenty-first.....578
Second.....542	Twelfth.....388	Twenty-second.....690
Third .....475	Thirteenth .....474	Twenty-third.....525
Fourth .....442	Fourteenth.....537	Twenty-fourth .....726
Fifth .....304	Fifteenth.....1,175	Twenty-fifth.....433
Sixth.....310	Sixteenth.....555	Twenty-sixth .....951
Seventh.....697	Seventeenth .....720	Twenty-seventh.....540
Eighth.....296	Eighteenth.....552	Twenty-eighth.....218
Ninth .....329	Nineteenth.....1,436	Unknown .....142
Tenth .....411	Twentieth.....1,629	
Total.....17,194		

It will be observed from the foregoing table that the highest number of births occurred in the Twentieth Ward, one thousand six hundred and twenty-nine (1,629); then follows the Nineteenth, one thousand four hundred and thirty-six (1,436); the lowest number in the Twenty-eighth, two hundred and eighteen (218).

The average births per month during the year was	1,433
" " " " week " " "	330
" " " " day " " "	47

MARRIAGES.

The number of marriages registered during the year 1870 amounted to six thousand four hundred and twenty-one (6,421), an increase over the previous year of thirty-nine (39).

The number and percentage of marriages in each quarter of the year were as follows:

First quarter, ending March 31st,	1,559 = 24.28 per cent.
Second " " June 30th,	1,516 = 23.61 "
Third " " Sept. 30th,	1,425 = 22.19 "
Fourth " " Dec. 31st,	1,921 = 29.92 "
Total, - - -	<u>6,421 = 100. "</u>

The following table gives the birth-place of those married:

TABLE III.—MARRIAGES. *Nativities of the Parties.*

NATIVITIES.		BIRTH-PLACE OF BRIDES.			Total of grooms.	Percent'ge of grooms.
		U. States.	Foreign.	Not given.		
BIRTH-PLACE OF GROOMS.	United States.....	3,375	286	16	3,677	59.84
	Foreign.....	671	1,734	9	2,414	40.16
	Not given.....	33	4	293	330	
Total of the brides.....		4,079	2,024	318	6,421	
Percentage of brides.....		66.01	33.99	.....	.....	100. =

It will be observed three thousand six hundred and seventy-seven (3,677), or 59.84 per cent. of men married were natives of the United States, of whom three thousand three hundred and seventy-five (3,375) married women of the United States, two hundred and eighty-six (286) married foreign women, and sixteen (16) married women whose nativities were unknown.

The number of men married, of foreign birth, amounted to two thousand four hundred and fourteen (2,214), or 40.16 per cent., of whom six hundred and seventy-one (671) married

women of the United States, one thousand seven hundred and thirty-four (1,734) married foreign women, and nine (9) married women whose nativities were unknown.

The number of men married whose nativities were unknown amounted to three hundred and thirty (330), of whom thirty-three (33) married women of the United States, four (4) married foreign women, and two hundred and ninety-three (293) married women whose nativities were unknown.

The number of women married who were natives of the United States was four thousand and seventy-nine (4,079), or 66.01 per cent., of whom three thousand three hundred and seventy-five (3,375) married men of the United States, two hundred and eighty-six (286) married foreign men, and sixteen (16) married men whose nativities were unknown.

Two thousand and twenty-four (2,024), or 33.99 per cent., women of foreign birth were married, of whom two hundred and eighty-six (286) married men of the United States, and one thousand seven hundred and thirty-four (1,734) married foreign men, and four (4) married men whose nativities were unknown.

The number of women married whose nativities were unknown amounted to three hundred and eighteen (318), of whom sixteen (16) married men of the United States, nine (9) married foreign men, and two hundred and ninety-three (293) married men whose nativities were unknown.

Of the whole number of persons married (of both parties), natives of the United States amounted to seven thousand seven hundred and fifty-six (7,756), while those of foreign birth amounted to four thousand four hundred and thirty-eight (4,438).

The number of marriages in which both parties were natives of the United States was three thousand three hundred and seventy-five (3,375), and the number of marriages in which both parties were of foreign birth was one thousand seven hundred and thirty four (1,734), and the number of marriages in which the nativities of both parties were unknown amounted to two hundred and ninety-three (293).

The following table will show the ages of the parties married during the year, and their percentages :

TABLE IV.—MARRIAGES. *Age of the Parties.*

1870.		AGES OF THE WOMEN.								Total of men.	Percentage of men.
		Under 20.	20 to 25.	25 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	Not given.		
AGES OF THE MEN.	Under 20.....	17	8	.....	.....	.....	.....	.....	.....	25	.38
	20 to 25.....	791	1,293	147	25	2	.....	.....	13	2,271	35.36
	25 to 30.....	268	1,079	493	101	10	.....	.....	16	1,967	30.63
	30 to 40.....	67	321	443	313	32	.....	1	5	1,182	18.71
	40 to 50.....	2	41	66	167	72	4	.....	1	353	5.49
	50 to 60.....	1	7	8	42	51	23	.....	1	183	2.07
	60 to 70.....	.....	1	3	12	16	14	1	.....	47	.73
	70 to 80.....	.....	.....	.....	.....	2	1	1	.....	4	.06
	80 to 90.....	.....	.....	.....	.....	.....	1	1	.....	2	.03
	Not given.....	.....	7	2	.....	.....	.....	.....	428	437	
Total of the women,		1,146	2,757	1,162	660	185	43	4	464	6,421	
Percentage of the women.....		17.84	42.93	18.09	10.27	2.88	.66	.06			

The number of men married under twenty was twenty-five (25), or .38 per cent., of whom seventeen (17) married women under twenty, and eight (8) married between twenty and twenty-five.

The number of men married between the age of twenty and twenty-five amounted to two thousand two hundred and seventy-one (2,271), or 35.36 per cent., of whom seven hundred and ninety-one (791) married women under twenty, one thousand two hundred and ninety-three (1,293) married women between twenty and twenty-five, one hundred and forty-seven (147) married women between twenty-five and thirty, twenty-

five (25) married women between thirty and forty, two (2) married women between forty and fifty, and thirteen (13) married women whose age was not given.

The number of men married between twenty-five and thirty was one thousand nine hundred and sixty-seven (1,967), or 30.63 per cent., of whom two hundred and sixty-eight (268) married women under twenty, one thousand and seventy-nine (1,079) married women between twenty and twenty five, four hundred and ninety-three (493) married women between twenty-five and thirty, one hundred and one (101) married women between thirty and forty, ten (10) married women between forty and fifty, and sixteen (16) married women whose age was not given.

The number of men married between thirty and forty amounted to one thousand one hundred and eighty-two (1,182), or 18.71 per cent., of whom sixty seven (67) married women under twenty, three hundred and twenty-one (321) married women between twenty and twenty-five, four hundred and forty-three (443) married women between twenty-five and thirty, three hundred and thirteen (313) married women between thirty and forty, thirty-two (32) married women between forty and fifty, one (1) married a woman between sixty and seventy, and five (5) married women whose age was not given.

The number of men married over the age of forty amounted to five hundred and thirty-nine (539), or 8.38 per cent.

The number of women married under twenty amounted to one thousand one hundred and forty-six (1,146), or 17.84 per cent., of whom seventeen (17) married men under twenty, seven hundred and ninety-one (791) married men between twenty and twenty-five, two hundred and sixty-eight (268) married men between twenty-five and thirty, sixty-seven (67) married men between thirty and forty, two (2) married men between forty and fifty, and one (1) married a man between fifty and sixty.

The number of women married between twenty and twenty-five was two thousand seven hundred and fifty-seven (2,757), or

42.93 per cent., of whom eight (8) married men under twenty, one thousand two hundred and ninety-three (1,293) married men between twenty and twenty-five, one thousand and seventy-nine (1,079) married men between twenty-five and thirty, three hundred and twenty-one (321) married men between thirty and forty, forty-one (41) married men between forty and fifty, seven (7) married men between fifty and sixty, one (1) married a man between sixty and seventy, and seven (7) married men whose age was not given.

The number of women married between twenty-five and thirty amounted to one thousand one hundred and sixty-two (1,162), or 18.09 per cent., of whom one hundred and forty-seven (147) married men between twenty and twenty-five, four hundred and ninety-three (493) married men between twenty five and thirty, four hundred and forty-three (443) married men between thirty and forty, sixty-six (66) married men between forty and fifty, eight (8) married men between fifty and sixty, three (3) married men between sixty and seventy, and two (2) married men whose age is not given.

The number of women married between thirty and forty was six hundred and sixty (660), or 10.27 per cent., of whom twenty-five (25) married men between twenty and twenty-five, one hundred and one (101) married men between twenty-five and thirty, three hundred and thirteen (313) married men between thirty and forty, one hundred and sixty-seven (167) married men between forty and fifty, forty-two (42) married men between fifty and sixty, and twelve (12) married men between sixty and seventy.

The number of women married over the age of forty was two hundred and thirty-two (232), or 3.60 per cent.

There were four (4) women married between sixty and seventy, of whom one (1) married a man between thirty and forty, one (1) married a man between sixty and seventy, one (1) married a man between seventy and eighty, and one (1) married a man between eighty and ninety.

The ages of four hundred and thirty-seven (437) men and four hundred and sixty-four (464) women have been omitted.

The following table will give the number of marriages solemnized during the year, with the various ceremonies employed :

TABLE V.—MARRIAGES. *Ceremonies employed.*

MONTHS. 1870.	Total.	Methodist.	Catholic.	Presbyterian.	Episcopal.	Baptist.	Lutheran.	Aldermen.	German Reformed.	Inde-pendent.	Mayo.	Hebrew.	Evangelical Assoc'n	Dutch Reformed.	Unive-sal	Moravian.	Congregational.	Friends.	Church of Christ.	Unitarian.	Independ't German.	Second Advent.
January.....	580	134	120	68	54	60	54	18	38	7	5	5	4	3	4	...	1	...	2	2	1	...
February.....	486	102	122	43	50	33	46	24	27	10	12	8	2	2	...	1	2	1	1	...	...	...
March..	493	125	28	60	55	64	49	39	33	10	12	10	3	1	1	2	...	1	...	...	...	...
April.....	472	108	85	53	39	37	44	38	37	19	2	1	5	...	3	...	...	1	...	...	...	...
May	518	117	110	58	42	48	43	33	28	11	9	3	7	2	3	...	1	1	1	...	...	1
June	526	115	84	75	58	50	40	37	33	13	7	3	3	1	1	...	1	2	1	1	1	...
July	442	94	95	44	50	40	41	32	26	6	3	2	3	3	1	1	...	...	...	1	...	...
August.....	421	109	100	41	37	27	36	23	28	6	1	3	1	4	...	2	1	...	2	...	...	...
September	562	114	132	55	64	46	42	40	34	8	6	11	...	2	...	3	3	1	1	...	...	...
October	683	164	130	77	86	48	62	34	33	20	9	7	3	6	2	2	...	...	...	...	...	...
November	639	174	127	74	75	54	34	27	29	11	5	10	2	2	3	1	4	3	2	1	1	...
December.....	599	168	72	87	76	64	34	20	31	11	11	3	3	5	2	4	1	...	3	2	2	...
Total.....	6421	1524	1205	735	686	571	525	365	377	132	82	66	36	31	20	16	14	10	13	7	5	1

By reference to the above table it will be observed that the largest number of marriages were solemnized by Methodist ceremony, one thousand five hundred and twenty-four (1,524); then follows the Catholic, one thousand two hundred and five (1,205); Presbyterian, seven hundred and thirty-five (735); Episcopal, six hundred and eighty-six (686); then follows the various ceremonies, making in all twenty-one different denominations.

The largest number of marriages occurred in the month of

October, six hundred and eighty-three (683), while the month of August only contributed four hundred and twenty-one (421).

The average marriages per month,	- - -	535
“ “ week,	- - -	123
“ “ day,	- - -	17

MORTALITY.

The number of interments in the City during the year amounted to sixteen thousand seven hundred and fifty (16,750), an increase over the previous year of one thousand nine hundred and sixty-four (1,964), or 13.20 per cent.

Total number of interments during the year 1870,	-	16,750
White....	15,669	
Colored.....	1,081	

Total.....	16,750
------------	--------

Males.....	8,787
Females.....	7,963

Total.....	16,750
------------	--------

Male adults	4,084
Female “	3,841
	7,925

Male children.....	4,703
Female “	4,122
	8,825

Total	16,750
-------------	--------

Deaths from registered diseases.	14,328
“ “ Still-born	822
“ “ Old age.....	588
“ “ Unknown, external and accidental causes..	1,012

Total.....	16,750
------------	--------

From the above estimate we find the total interments in our City were sixteen thousand seven hundred and fifty (16,750), from which deduct still-born and those brought from the country for burial within the City limits, neither of which should be included in our bills of mortality, and the following statement will show the actual mortality in our City for the year 1870:

Total interments during the year.....	16,750
Deduct still-born.....	822
“ from country	611
	1,433
Net deaths in City.....	15,317

Taking the net deaths in our City, fifteen thousand three hundred and seventeen (15,317), and making the basis of our calculations on the late census, six hundred and seventy-four thousand and twenty-two (674,022), we find the deaths in our City to be 1 in every 44 of the population, thus showing the health of the City to be good, notwithstanding the high bill of mortality; and if the census could be properly taken, we feel confident that the figures would have been much higher. Notwithstanding it was retaken, it is still defective, and will continue so until a plan similar to that used in England is adopted, *i. e.*, to have the entire City canvassed within a few hours; and we urge the necessity for our City Councils to take the matter in hand, and have a semi-decennial census taken, which would prove of immense value to the commercial, financial and manufacturing interests of our City, and would enable us to issue statistics of more reliable character. We have the facilities in our City for securing more correct details, and would make such a census more reliable than that made by the General Government.

By reference to the following table (No. VI.) it will be observed that the number of diseases seems to be increasing from year to year, many of which seem to be analogous, and the difficulty can never be obviated until the medical profession adopt a system of nomenclature, and confine themselves strictly to the

same. A few years ago the attention of the College of Physicians was called to the subject by the late Dr. Wilson Jewell, the originator and projector of the present Registration Law, and a member of the Board of Health, and it was referred to a Special Committee to prepare a proper nomenclature of diseases to enable the Registrar to make the proper classification, which matter still remains with said Committee, or if any action has been taken thereon no information has reached us. When the nomenclature is once adopted, and this department notified, we will then inform every physician residing in our City, and endeavor to present not only our weekly bill of mortality, but our annual report, far more correct than at present. It would astonish some of the medical faculty to examine the death register in this office, and see the disgraceful terms used by many of the practitioners of medicine. Such terms as "amonia" for "pneumonia," "still-born" for a child two days old, and many other ridiculous terms. If the medical profession of all branches would unite and use every exertion to carry out a recent law passed by our Legislature (see p. 705, Pamphlet Laws, 1870), many of the present evils would be averted, and the standard of the medical profession elevated to that standpoint that once honored the diploma as a merited tribute to one entering on the duties of his noble profession.

Statistics to be of value must be correct, and the following table has been prepared with great care, and is as accurate as can be made, taking into consideration the material we have to work upon, and we would urge all those whose duty it is to make returns to this office to be as correct as possible, and co-operate with us in correcting the evils which we have been subjected to, and have our statistics to compare favorable with those of other cities.

DISEASES.																					AGES.										Adults.	Minors.	Alms-house.	People of Color.					
	Total.	Males.	Females.	Boys.	Grls.	Under 1 year.	2		5		10		15		20		30		40		50		60		70		80		90						100		110		
							1	2	5	10	15	20	30	40	50	60	70	80	90	100	110																		
																						1	2	5	10	15	20	30	40	50					60	70	80	90	100
Abscess.....	64	34	30	6	12	5	...	3	5	4	1	17	10	6	4	7	2	...	...	...	46	18	7	7															
Albuminuria....	48	26	22	6	8	...	...	1	4	2	3	15	10	4	6	1	4	...	...	...	40	8	7	4															
Anemia.....	22	9	13	4	5	6	...	...	...	...	...	1	...	4	2	5	1	...	...	...	13	9	...	...															
Aneurism.....	3	3	...	1	...	1	...	...	...	...	...	...	...	2	...	...	...	...	...	...	2	1	1	2															
" of the Aorta..	10	8	2	1	...	...	...	...	...	1	1	4	...	2	1	1	...	...	...	9	1	1	...																
Anesthesia.....	1	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1	...	...	...																
Apoplexy.....	24	138	102	1	2	2	...	...	1	...	13	28	32	47	58	42	13	4	...	237	3	10	8																
Asphyxia.....	52	27	25	25	25	49	...	...	1	...	...	...	...	1	3	6	5	5	1	...	2	50	...	...															
Asthma.....	24	10	14	2	1	2	1	...	...	...	...	...	...	1	3	6	5	5	1	...	21	3	2	1															
Bed Sores.....	1	...	1	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	19	39	...	3																
Burns and Scalds..	58	29	29	20	19	5	6	17	8	2	1	8	4	4	3	...	...	...	...	1	...	...	...																
Boil.....	1	1	...	...	...	...	...	...	...	...	...	...	...	1	28	23	14	4	1	101	3	1	6																
Cancer.....	104	28	76	3	...	1	...	1	...	...	1	5	9	17	28	23	14	4	1	19	...	...	...																
" of the Breast..	19	...	19	...	...	...	...	...	...	...	...	...	...	4	7	3	4	1	...	1	...	...	...																
" " Bladder.....	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	1	...	1																
" " Eye.....	3	2	1	1	...	...	...	1	...	...	...	...	...	...	...	...	...	2	...	2	...	...	...																
" " Face.....	2	1	1	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	1	...	...	...																
" " Jaw.....	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	3	...	...	...																
" " Kidneys.....	3	1	2	...	...	...	...	...	...	...	...	...	...	1	...	1	1	...	...	1	...	...	...																
" " Larynx.....	1	1	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...																
" " Lungs.....	1	...	1	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	15	...	2	1																
" " Liver.....	15	6	9	...	...	...	...	...	...	...	...	...	6	2	6	1	...	...	...	2	...	...	...																
" " Month.....	2	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	2	...	...	...																
" " Neck.....	2	2	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...	1	...	...	...																
" " Ovaries.....	1	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	3	...	...	...																
" " Pancreas.....	3	3	...	...	...	...	...	...	...	...	...	...	...	1	2	...	...	...	...	1	...	...	...																
" " Pylorus.....	1	1	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	5	...	...	...																
" " Rectum.....	5	2	3	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	1	...	...	...																
" " S & Bowels..	52	26	26	...	...	...	...	...	...	...	...	...	7	11	12	14	7	...	...	52	...	2	1																
" " Throat.....	1	1	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	1	...	...	...																
" " Thigh.....	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	43	1	...	...																
" " Uterus.....	43	...	43	...	...	...	...	...	...	...	...	3	15	5	11	5	4	...	...	...	...	...	...																
Caries of the Femur...	1	1	...	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1	1	...	...																
" " Temporal Bone.	1	...	1	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	2	4	1	1																
" " Spine.....	6	1	5	1	3	...	...	2	...	2	...	1	...	1	3	...	...	...	...	6	...	...	...																
Cirrhosis.....	6	4	2	...	...	...	...	...	...	...	...	...	...	1	6	8	4	...	...	21	...	...	...																
" of the Liver.	21	16	5	...	...	...	...	...	...	...	...	...	...	1	6	8	4	...	...	...	...	...	...																
Casualties.....	191	162	29	40	6	1	2	10	9	12	12	41	46	18	13	8	12	5	1	145	46	1	...																
Carbuncle.....	12	9	3	2	1	1	1	...	...	...	...	1	...	...	...	6	1	1	...	9	3	1	...																
Croup.....	316	177	139	177	136	29	81	165	38	...	...	1	...	1	1	...	...	...	...	3	313	1	3																
Cerebro-spinal Meningitis.....	36	28	8	24	7	10	6	8	5	1	1	3	1	...	1	...	...	...	...	5	31	5	1																
Chorea.....	5	...	5	...	4	...	...	...	1	1	2	1	...	...	...	2	...	...	...	3	3	...	1																
Congestion.....	6	3	3	1	2	1	1	1	...	...	...	...	...	...	...	...	...	...	...	152	216	...	17																
" of the Brain.	378	231	147	123	103	111	39	43	22	9	2	19	42	37	24	18	10	2	...	1	...	...	...																
" Chest.....	1	1	1	...	...	...	...	...	...	...	...	...	1	1	1	1	...	...	...	1	...	...	...																
" Heart.....	4	1	3	...	...	...	...	...	...	...	...	...	1	1	1	1	...	...	...	4	...	...	...																
" Kidneys.....	1	...	1	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...																
" Liver.....	6	5	1	2	...	1	...	...	...	...	...	...	1	...	2	1	...	...	...	4	2	...	...																
" Lungs.....	154	75	79	41	44	42	20	12	6	...	5	9	9	13	8	13	10	6	1	...	69	85	...																
" S. & Bowels.	3	2	1	2	1	2	1	...	...	...	...	...	...	...	...	...	...	...	...	...	3	...	...																
" Spine.....	4	1	3	1	2	2	1	...	...	...	...	...	...	...	1	...	...	...	...	1	3	...	...																
Congestive Chills.....	5	2	3	2	1	...	2	...	...	...	...	1	1	1	...	...	...	...	...	2	3	...	...																
Colic.....	5	4	1	1	...	1	...	...	...	...	...	...	...	...	1	2	...	...	...	4	1	...	...																
Child-bed.....	12	...	12	...	...	...	...	...	...	...	...	...	9	3	...	...	...	...	...	12	...	...	...																
Convulsions.....	733	401	332	373	308	457	111	93	10	4	6	11	13	11	13	3	3	...	...	52	681	4	42																
" Puerperal.	23	...	23	...	7	...	...	...	...	...	...	7	13	3	...	...	...	...	...	16	7	1	1																
Consumption of Bow's	21	14	7	2	2	2	2	1	...	...	...	...	7	6	1	1	1	...	...	17	4	...	...																
" Lungs.....	2308	1118	1190	133	170	32	26	26	18	31	170	681	548	366	231	116	65	7	1	2005	303	125	153																

of Philadelphia during the year 1870.

[illegible]

Country.	Nativity.			WARDS.																											
	U. States.	Foreign.	Unknown.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
42	100	1	1	55	44	25	31	28	13	46	27	14	25	29	22	26	20	63	27	42	22	85	82	28	36	23	37	19	59	23	9
1	12	7	1	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
1	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
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16	597	144	68	29	38	16	56	35	10	41	20	16	32	24	12	10	22	59	24	31	33	60	44	7	12	11	32	14	46	48	11
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	1	1	1	1																											

TABLE VI.—

DISEASES.	AGES.																				Adults.	Minors.	Alms house.	People of Color.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
	Total.	Males.	Females.	Boys.	Girls.	Under 1 year.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
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Continued.

Country.	Nativity.			WARDS.																														
	U. States.	Foreign.	Unknown.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28			
15	372	33	8	13	23	11	13	10	6	21	13	5	11	7	8	1	6	1	20	11	18	39	29	35	2	8	16	6	21	26	4			
4	127	31	3	6	7	4	16	6	4	18	7	4	6	7	4	1	4	1	10	3	18	2	11	7	1	4	3	4	10	4	2			
1	13	11	1	1	2	1	...	...	...	3	...	...	...	...	...	...	...	2	1	1	3	1	1	3	2	...	...	...	...	...	...			
1	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...			
2	23	9	4	3	1	...	2	2	...	1	...	...	1	...	1	...	...	4	1	...	2	1	4	2	...	1	1	...	2	4	1			
1	17	8	3	2	1	...	...	...	...	3	...	...	1	...	...	...	...	1	4	1	...	...	...	...	...	1	1	2	...	5	...			
1	18	16	2	...	1	...	2	...	1	4	4	...	1	...	1	...	1	5	1	3	1	2	6	...	...	1	...	...	1	...	...			
29	574	209	28	28	34	26	43	23	14	47	26	13	17	13	17	16	18	68	23	16	35	44	3	6	14	22	20	34	24	47	11			
1	631	31	...	1	5	2	1	3	2	4	1	1	4	...	2	3	4	4	2	2	3	4	6	6	...	4	2	7	1	1	46	11		
2	1	50	4	3	...	...	1	...	...	1	1	1	1	1	1	...	2	3	10	3	...	1	1	...	...	...	...	...	1	...	...			
2	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	3	1	...		
12	208	60	13	12	11	7	12	9	4	16	6	6	5	6	7	10	6	14	6	9	14	22	13	5	9	4	10	5	18	21	2	...		
1	3	...	...	...	1	...	...	...	...	...	...	...	...	2	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
1	10	6	2	1	...	1	2	2	1	...	...	...	...	...	...	1	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
7	262	5	16	8	15	5	8	15	2	16	5	2	5	3	1	6	6	24	5	2	6	25	20	2	6	8	15	8	7	52	5	...		
2	24	9	3	...	3	...	2	1	...	3	1	1	1	...	1	...	1	...	1	...	1	1	1	1	...	1	3	...	1	1	2	...		
8	624	24	3	35	35	15	22	24	11	30	10	12	19	16	7	10	10	47	14	31	38	76	23	9	9	16	18	21	42	31	9	...		
1	21	25	15	1	3	2	2	2	...	3	1	1	...	1	1	2	1	3	1	2	2	1	3	...	1	1	1	...	11	8	...	...		
45	2	1	4	1	4	6	4	4	1	...	1	1	1	1	3	...	1	...	1	...	1	3	3	4	...	...	1	1	2	1	...	...		
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
...	10	6	1	2	...	2	2	1	...	2	...	...	...	2	1	...	4	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...		
1	1	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
1	7	3	1	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
23	269	261	58	10	22	23	24	15	9	35	18	15	28	11	12	12	17	34	13	16	22	35	26	9	16	19	20	4	26	66	...			
1	21	5	...	...	1	...	2	...	1	...	...	...	1	...	1	...	...	4	2	1	2	2	...	...	...	...	...	...	...	...	...	...		
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
1	3	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
19	137	76	13	7	7	5	7	6	6	11	6	2	7	2	7	10	6	11	5	9	10	12	11	1	13	9	11	3	4	16	3	...		
1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
1	27	12	4	3	...	2	2	2	3	7	1	...	1	...	...	...	2	2	1	2	1	3	1	...	...	1	1	1	1	2	4	1	...	
...	7	6	1	...	2	...	...	...	...	4	...	...	...	1	...	...	1	...	1	...	...	2	...	1	...	...	...	...	...	1	1	...	...	
1	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	
...	2	1	...	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1	74	1	5	2	4	1	8	6	...	6	2	...	2	2	1	2	2	1	2	3	3	4	9	...	1	...	3	2	2	6	1	...	...	
4	51	21	7	3	6	...	2	8	1	5	3	1	4	...	1	1	4	4	1	...	3	3	7	...	2	4	4	...	2	6	...	...	...	
...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

TABLE VI.—

DISEASES.	Total.	Males.	Females.	Boys.	Girls.	AGES.																Adults.	Minors.	Alms-house.	People of Color.		
						Under 1 year.																					
							1	2	5	10	15	20	30	40	50	60	70	80	90	100	110						
Still-born.....	822	480	333	489	333	822																		822		78	
Stricture of Bowels.....	1	1																	1					1			
“ Esophagus.....	5	3	2	1	1			2						3										3	2		
“ Pylorus.....	1	1																1						1			
“ Rectum.....	2		2											1	1									2		1	
Strangulation.....	6	2	4	2	4	3		2	1															6			
Suicide.....	25	21	4										6	6	6	4	2	1					25			1	
Stone in Bladder.....	1	1																	1				1			1	
Suppression of Urine.....	1	1																1					1				
Small-pox.....	9	5	4	4	4	3		3	1	1						1							1	8			
Suffocation.....	14	11	3	6	2	6							2	1	1		2							6	8	3	
Sore Throat.....	8	6	2	5	2	2		3	2							1								1	7		
“ Mouth.....	10	6	4	6	4	7		2	1															10	1		
Struck by Lightning.....	2	1	1	1							1													1	1		
Syphilis.....	23	19	4	11	2	10		1	1	1				5	3	2								10	13	9	
Syncope.....	4	1	3														1	1						4			
Tabes Mesenterica.....	27	15	12	15	12	12		10	3	1	1													27		3	
Teething.....	44	23	21	23	21	21		23																	44		2
Tetanus.....	44	34	10	19	8	11		1	2	3	9		1	10	2	5								17	27	5	
Tumor.....	38	15	23	2	2								1	5	10	6	8	2	2	1				34	4	2	
Unknown.....	117	79	38	42	21	48		6	6	1	1	1	14	10	6	10	10	4						54	63	8	
Uraemia.....	21	13	8	2	3			1	2					1	3	2	3	5	1	1				16	5	2	
Ulceration.....	2	2													1		1							2		1	
“ of Bladder.....	1	1															1							1			
“ of Lungs.....	1	1			1								1											1			
“ Stom. & B.....	20	5	15	1	3	2		1					1	3	4	3	3	2	1					16	4	1	
“ Throat.....	5	2	3	1	3				1	3							1							1	4		
Wounds.....	3	3												1			2							3			
“ Gun shot.....	13	12	1	2	1			1			1	1	9	1										10	3	1	
Worms.....	1		1		1			1																1			
Total.....	16,750	8,787	7,963	4,703	4,122	4,629	1,339	1,464	614	300	449	1,632	1,491	1,269	1,065	1,027	895	422	114			10,792	5,825	599	1,081		

The number of Deaths reported for the year 1870.....	16,750
White.....	15,669
Colored.....	1,081
Males.....	8,787
Females.....	7,963
From which deduct Still-born.....	822
“ “ “ Country.....	611
Net Deaths in City.....	1,433
Net Deaths in City.....	15,317

Continued.

		Nativity.				WARDS.																											
Country.	U. States.	Foreign.	Unknown.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28		
7	822	.....	.....	29	27	21	54	45	14	56	26	10	19	22	14	18	23	54	30	34	33	71	69	6	28	13	19	23	42	8	7		
.....	3	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	1	.....	1	.....	1	.....	.....	.....	1	.....	.....	.....	.....		
.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....		
.....	6	.....	.....	1	.....	.....	1	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....		
3	9	12	4	2	1	.....	.....	2	.....	.....	1	2	2	.....	1	.....	2	.....	.....	.....	.....	.....	3	3	1	.....	1	.....	.....	.....	.....		
.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....		
.....	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....		
1	10	2	2	.....	.....	.....	3	2	3	.....	.....	1	.....	.....	.....	.....	.....	1	.....	1	1	.....	2	1	.....	.....	.....	.....	.....	.....	.....		
.....	10	.....	.....	1	1	.....	.....	.....	.....	1	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	1	.....	2	.....	.....	.....	.....	.....	.....	.....	.....		
2	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....		
1	19	.....	.....	4	.....	.....	1	1	1	1	.....	.....	1	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....		
.....	3	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....		
.....	27	.....	.....	2	2	1	.....	1	.....	2	1	1	.....	1	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....		
.....	44	.....	.....	1	7	.....	5	2	1	3	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....		
2	37	6	1	1	1	1	1	3	.....	2	1	1	1	3	.....	.....	.....	6	2	.....	.....	.....	5	3	.....	.....	.....	.....	.....	.....	.....		
2	26	10	2	2	2	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	1	3	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....		
20	80	9	28	1	6	1	8	7	3	3	2	6	1	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....		
3	15	4	2	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....		
.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....		
.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....		
.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....		
.....	12	7	1	2	.....	.....	1	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....		
1	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....		
.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....		
.....	12	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....		
.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....		
.....	12	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....		
.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....		
611	12,584	3273	893	635	786	422	732	586	264	896	440	321	478	359	336	369	402	1050	446	595	678	1182	1114	230	420	389	573	366	878	*936	256		

The number of Male adults.....	4,084
“ “ “ Female adults.....	3,841
“ “ “ Male children.....	4,703
“ “ “ Female children.....	4,122
Deduct Still-born Males.....	489
“ “ “ Females.....	333
“ Country.....	611
Net Deaths in City.....	1,433
Net Deaths in City.....	15,317

*Deduct deaths in Alms-house, 599, and we have the net deaths in the Twenty-seventh Ward, 337.

The mortality of adults amounted to seven thousand nine hundred and twenty-five (7,925), an increase over the previous year of one thousand two hundred and forty-two (1,242), or 17.08 per cent., while the mortality of children was eight thousand eight hundred and twenty-five (8,825), an increase over the previous year of seven hundred and twenty-two (722), or 8.91 per cent.

By reference to table VI, it will be observed that twelve thousand five hundred and eighty-four (12,584) of those died were born in the United States; three thousand two hundred and seventy-three (3,273) were of foreign birth, and eight hundred and ninety-three (893) whose nativities were unknown.

Apoplexy.—This was the reported cause of two hundred and forty (240) deaths, an increase over the previous year of sixty (60); one hundred and thirty-eight (138) were males, and one hundred and two (102) were females; two hundred and thirty-seven (237) were adults and three (3) were children.

Cancer.—The number of deaths from Cancer were two hundred and sixty-one (261), an increase over the previous year of twenty-nine (29); they were classified as follows: Cancer, one hundred and four (104); of the Breast, nineteen (19); of the Bladder, one (1); of the Eye, three (3); of the Face, two (2); of the Jaw, one (1); of the Kidneys, three (3); of the Larynx, one (1); of the Lungs, one (1); of the Liver, fifteen (15); of the mouth, two (2); of the Neck, two (2); of the Ovaries, one (1); of the Pancreas, three (3); of the Pylorus, one (1); of the Rectum, five (5); of the Stomach and Bowels, fifty-two (52); of the Throat, one (1); of the Thigh, one (1); of the Uterus, forty-three (43).

Croup.—Of this much-dreaded disease of children three hundred and sixteen (316) deaths were reported, an increase over the previous year of seventy-nine (79); of this number one hundred and seventy-seven (177) were males, and one hundred and thirty-nine (139) were females; the number of children under five years amounted to two hundred and seventy-five (275).

Convulsions.—The deaths thus classed amounted to seven hundred and thirty-three (733), an increase over the previous year of eighty-six (86); fifty-two (52) were adults, and six hundred and eighty-one (681) were children.

Consumption of the Lungs.—The number of deaths from Consumption amounted to two thousand three hundred and eight (2,308), an increase over the previous year of three hundred and thirty-three (333); of those died one thousand four hundred and six (1,406) were born in the United States, while those of foreign birth were seven hundred and thirty-two (732); the deaths from this disease amounted to 13.78 per cent. of the entire bill of mortality; the deaths in each month of the year were as follows:

January,	200	July,	179
February,	197	August,	177
March,	263	September, . . .	135
April,	206	October,	153
May,	248	November, . . .	214
June,	156	December, . . .	180

The largest number of deaths occurred in the month of March, and the smallest number in October.

The average deaths from this disease in each month,	192
“ “ “ “ “ “ “ week,	44
“ “ “ “ “ “ “ day,	6

Cholera Infantum.—The number of deaths from this disease amounted to one thousand and two (1,002), an increase over the previous year of one hundred and seventeen (117); four hundred and eighty-two (482) were males, and five hundred and twenty (520) females; seven hundred and fifty-five (755) died under one year.

Cholera Morbus.—The number of deaths from this disease amounted to thirty-eight (38), a decrease from the previous year of fourteen (14); twenty-three (23) were adults, and fifteen (15) were children.

Diphtheria.—The number of deaths from Diphtheria was one hundred and seventy-two (172), a decrease from the previous

year of ten (10); of which number seventy-two (72) were males, and one hundred (100) were females; eight (8) were adults, and one hundred and sixty-four (164) were children; they were classified as follows:

Male adults, . . . 4	Male children, . . . 68
Female, " . . . 4	Female, " . . . 96
Deaths, first quarter, . . .	33
" second " . . .	25
" third " . . .	31
" fourth " . . .	88

Diarrhœa.—The number of deaths reported from this disease amounted to one hundred and ninety-one (191), an increase over the previous year of sixteen (16); of which one hundred and eleven (111) were males, and eighty (80) were females; one hundred and six (106) were adults, and eighty-five (85) were children.

Dysentery.—Furnishes eighty two (82), a decrease from the previous year of eight (8); forty-seven (47) were males, and thirty-five (35) were females; fifty (50) were adults, and thirty-two (32) children.

Debility.—The number of deaths reported under this head amounted to eight hundred and nine (809), an increase over the previous year of one hundred and seventy-three (173); of which four hundred and thirty-nine (439) were males, and three hundred and seventy (370) were females; three hundred and twenty-eight (328) were adults, and four hundred and eighty-one (481) were children.

Fever, Relapsing.—In the early part of the year this disease made its appearance, and increased rapidly until August, when it abated, and a few cases continued through the balance of the year; the number of deaths reported were one hundred and sixty-two (162); one hundred and twenty-one (121) were males, and forty-one (41) were females; one hundred and forty-four (144) were adults, and eighteen (18) were children; this disease seemed

to be extraordinarily fatal among the colored portion of our population, the number of deaths being one hundred and seven (107) or 66.05 per cent. of the entire number, while those of the whites only amounted to fifty-five (55) or 33.95 per cent.

Fever, Scarlet.—The deaths from this much dreaded disease amounted to nine hundred and fifty-six (956), an increase over the previous year of two hundred and fifty-seven (257), and the highest that has been attained in our city since the year 1861; of which four hundred and seventy (470) were males, and four hundred and eighty-six (486) were females; thirteen (13) were adults, and nine hundred and forty-three (943) were children.

Deaths, first quarter, . . .	380
“ second “ . . .	401
“ third “ . . .	104
“ fourth “ . . .	71

Fever, Typhoid.—The number of deaths from this disease amounted to four hundred and nine (409), an increase over the previous year of thirty-six (36); two hundred and twenty-eight (228) were males, and one hundred and eighty-one (181) were females; two hundred and fifty-eight (258) were adults, and one hundred and fifty-one (151) were children; two hundred and seventy-nine (279) were natives of the United States, one hundred and nineteen (119) were of foreign birth, and eleven (11) whose nativity were unknown.

Fever, Typhus.—Of this disease we have registered sixty-nine (69), an increase of twenty (20) over the previous year; forty-seven (47) were adults, and twenty-two (22) were children; forty one (41) were males, and twenty-eight (28) were females.

Whooping Cough.—We have registered from this disease one hundred and five deaths, (105), an increase over the previous year of thirty-one (31); forty-five (45) were males, and sixty (60) were females.

Hernia.—We have registered twelve (12) deaths, a decrease from the previous year of four (4); three (3) were males, and nine (9) were females.

Inflammation of the Brain.—Of this disease we have recorded four hundred and thirteen (413), an increase over the previous year of fifty-one (51); two hundred and twenty-five (225) were males, and one hundred and eighty-eight (188) were females; seventy-six (76) were adults, and three hundred and thirty-seven (337) were children.

Murder.—We have registered seventeen (17) deaths from violence; fourteen (14) were males, and three (3) were females; fifteen (15) were adults, and two (2) were children.

Mania-a-Potu.—Under this head we have registered fifty-six (56) deaths; fifty-one (51) were males, and five (5) were females; sixteen (16) were born in the United States, twenty-five (25) were of foreign birth, and fifteen (15) whose nativities were unknown.

Old Age.—The number of deaths reported from old age amounted to five hundred and eighty-eight (588), an increase over the previous year of one hundred and eight (108); one hundred and ninety-two (192) were males, and three hundred and ninety-six (396) were females; the excess of females over the previous year was one hundred and five (105); two hundred and sixty-nine (269) were natives of the United States, two hundred and sixty-one (261) were of foreign birth; and fifty-eight (58) whose nativities were unknown.

Still-Born.—The number of still-born reported were eight hundred and twenty-two (822), an increase over the previous year of thirty-three (33); four hundred and eighty-nine (489) were males, and three hundred and thirty-three (333) were females.

Small Pox.—The number of deaths from this disease were nine (9), a slight increase over the previous year.

Tetanus.—The number of deaths from this disease amounted to forty-four (44), an increase over the previous year of sixteen (16); seventeen adults, and twenty-seven (27) were children; thirty-four (34) were males, and ten (10) were females.

Tumor.—The number of deaths reported were thirty-eight (38), an increase over the previous year of seventeen (17); thirty-four (34) were adults, and four (4) were children.

Teething.—The number of deaths from teething amounted to forty-four (44), an increase over the previous year of twelve (12); twenty-three (23) were males, and twenty-one (21) were females.

Wounds, Gun Shot.—The deaths from gun shot wounds were thirteen (13), an increase of six (6) over the previous year.

The following table shows the percentage of deaths during certain specified periods of life, compared with a similar statement of the mortality in the year 1869.

TABLE VII.

1869.					1870.		
Under	1 year,	4,324	Being	29.24 per cent.	4,629	Being	27.63 per cent.
1 to	2 "	1,279	"	8.65 "	1,339	"	7.90 "
2 "	5 "	1,292	"	8.74 "	1,464	"	8.74 "
5 "	10 "	562	"	3.12 "	644	"	3.84 "
10 "	15 "	260	"	1.75 "	300	"	1.79 "
15 "	20 "	386	"	2.61 "	449	"	2.68 "
20 "	30 "	1,408	"	9.52 "	1,632	"	9.74 "
30 "	40 "	1,251	"	8.46 "	1,491	"	8.90 "
40 "	50 "	1,020	"	6.89 "	1,269	"	7.57 "
50 "	60 "	882	"	5.96 "	1,065	"	6.35 "
60 "	70 "	896	"	6.05 "	1,027	"	6.13 "
70 "	80 "	742	"	5.01 "	895	"	5.34 "
80 "	90 "	402	"	2.71 "	422	"	2.51 "
90 "	100 "	76	"	.50 "	114	"	.68 "
100 "	110 "	6	"	.04 "	10	"	.05 "
Total.....		14,786	.....	.....	16,750	.....	.....

It will be observed from the foregoing table, that four thousand six hundred and twenty-nine (4,629), or 27.63 per cent. of all the deaths were of children under one year of age; one thousand three hundred and thirty-nine (1,339), or 7.90 per cent., between the age of one and two; one thousand four hundred and sixty-four (1,464), or 8.74 per cent., between the age of two and five; six hundred and forty-four (644), or 3.84 per cent., between the age of five and ten; three hundred (300), or 1.79 per cent., between the age of ten and fifteen; four hundred and forty nine (449), or 2.68 per cent., between the age of fifteen and twenty; one thousand six hundred and thirty-two (1,632), 9.74 per cent., between the age of twenty and thirty; one thousand four hundred and ninety-one (1,491), or 8.90 per cent., between the age of thirty and forty; one thousand two hundred and sixty-nine (1,269), or 7.57 per cent., between the age of forty and fifty; one thousand and sixty-five (1,065), or 6.35 per cent., between the age of fifty and sixty; one thousand and twenty-seven (1,027), or 6.13 per cent., between the age of sixty and seventy; eight hundred and ninety-five (895), or 5.34 per cent., between the age of seventy and eighty; four hundred and twenty-two (422), or 2.51 per cent., between the age of eighty and ninety; one hundred and fourteen (114) or .68 per cent., between the age of ninety and one hundred; ten (10), or .05 per cent., between the age of one hundred and one hundred and ten.

The total number of children under ten years was eight thousand and seventy-six (8,076), or 48.11 per cent. of the total mortality, while those over the age of seventy amounted to one thousand four hundred and forty-one (1,441), or 8.58 per cent.; the following comparative statement of the deaths in each quarter of the year, will prove of interest in connection with the mortality of children.

*Comparative Statement of the Deaths in each quarter of the
year 1870.*

	Adults.	Children.	Excess Of Children.	Total.
First quarter,	2,220	2,181		4,401
Second “	2,079	2,166	87	4,245
Third “	1,908	2,994	1,086	4,902
Fourth “	1,718	1,484		3,202
	7,925	8,825		16,750

It will be observed that during the third quarter the mortality of children amounted to one thousand and eighty-six (1,086), or 36.27 per cent. in excess of adults; this large mortality occurred in the summer months, and on reference to our mortuary tables we find the principal causes of deaths were diseases of the bowels so prevalent at this season, and can be attributed, and very justly, to the unwise, imprudent and indiscriminate purchase of green fruit which our markets are glutted with in the early part of the season; the sale of this poison is enormous and is a more serious matter than many suppose, and it would be well if our city authorities would turn their attention to the subject and pass such stringent laws as to prevent the sale of unripe fruit anywhere within the limits of the City.

The following table of mortality in each ward, with population according to the late census, with the ratio of deaths to population and the percentage of deaths in each ward to the total mortality.

TABLE VIII.—*Deaths in each Ward.*

WARDS.	Population.	Deaths.	Deaths to population.	Percentage of deaths to total mortality.
First.....	25,817	635	1 in 41	3.79
Second	30,220	786	1 in 38	4.69
Third	19,149	422	1 in 45	2.51
Fourth.....	20,852	732	1 in 29	4.37
Fifth	18,736	586	1 in 32	3.49
Sixth.....	12,064	264	1 in 46	1.57
Seventh.....	31,558	896	1 in 35	5.33
Eighth.....	22,286	440	1 in 50	2.62
Ninth.....	16,629	321	1 in 52	1.91
Tenth.....	23,312	478	1 in 48	2.85
Eleventh	14,845	359	1 in 41	2.14
Twelfth.....	15,171	336	1 in 45	2.00
Thirteenth	19,956	369	1 in 54	2.20
Fourteenth.....	22,643	402	1 in 56	2.40
Fifteenth.....	44,650	1,050	1 in 42	6.26
Sixteenth.....	19,256	446	1 in 43	2.66
Seventeenth	21,347	595	1 in 36	3.55
Eighteenth	26,366	678	1 in 38	4.04
Nineteenth.....	45,240	1,182	1 in 38	7.05
Twentieth	56,642	1,114	1 in 51	6.65
Twenty-first	13,861	230	1 in 60	1.37
Twenty-second.....	22,605	420	1 in 53	2.57
Twenty-third	20,888	389	1 in 53	2.32
Twenty-fourth	24,932	573	1 in 43	3.42
Twenty-fifth.....	18,639	366	1 in 51	2.18
Twenty-sixth.....	36,603	878	1 in 42	6.24
Twenty-seventh.....	19,385	337	1 in 57	2.01
Twenty-eighth.....	10,370	256	1 in 40	1.52
Alms-house.....		599		
Country.....		611		
Total deaths for 12 months.....		16,750		
Total population.....	674,022			
Ratio of deaths to population, 1 in 44.				

The highest mortality occurred in the Fourth Ward—one in every twenty-nine of the population; while the Twenty-first Ward being the lowest—one in every sixty of the population; the average deaths in each ward was five hundred and five (505), and the 1st, 2d, 4th, 5th, 7th, 15th, 18th, 19th, 20th, 24th and 26th each contributed over that amount.

The following Comparative Statement of the Census for 1860 and 1870, shows the ratio of Deaths to population during the years 1861 and 1870. We cannot compare the year 1860, as the Registration Law was only in operation six months of that year.

WARDS.	Population 1860.	Deaths to population 1861.	Population 1870.	Deaths to population 1870.
First.....	30,886	1 in 35	25,817	1 in 41
Second	29,123	1 in 38	30,220	1 in 38
Third.....	19,929	1 in 49	19,149	1 in 45
Fourth.....	23,461	1 in 34	20,352	1 in 29
Fifth.....	21,792	1 in 50	18,736	1 in 32
Sixth.....	14,882	1 in 52	12,064	1 in 46
Seventh.....	31,267	1 in 42	31,558	1 in 35
Eighth.....	27,770	1 in 65	22,286	1 in 50
Ninth.....	17,196	1 in 48	16,629	1 in 52
Tenth.....	21,849	1 in 51	23,312	1 in 48
Eleventh.....	16,681	1 in 36	14,845	1 in 41
Twelfth.....	16,681	1 in 46	15,171	1 in 45
Thirteenth.....	20,045	1 in 50	19,956	1 in 54
Fourteenth.....	24,258	1 in 56	22,643	1 in 56
Fifteenth.....	32,091	1 in 41	44,650	1 in 42
Sixteenth.....	20,067	1 in 37	19,256	1 in 43
Seventeenth.....	23,264	1 in 28	21,347	1 in 36
Eighteenth.....	20,441	1 in 34	26,366	1 in 38
Nineteenth.....	38,828	1 in 36	45,240	1 in 38
Twentieth.....	29,963	1 in 37	56,642	1 in 51
Twenty-first.....	17,159	1 in 51	13,861	1 in 60
Twenty-second.....	17,173	1 in 69	22,605	1 in 53
Twenty-third.....	23,985	1 in 55	20,888	1 in 53
Twenty-fourth.....	23,738	1 in 48	24,932	1 in 43
*Twenty-fifth.....	.....	.....	18,639	1 in 51
†Twenty-sixth.....	.....	.....	36,603	1 in 42
‡Twenty-seventh.....	.....	.....	19,385	1 in 57
§Twenty-eighth.....	.....	.....	10,370	1 in 40
Total population.....	565,529	.....	674,022	.....
Ratio of deaths to population.....	.....	1 in 39	.....	1 in 44

*Comprises a portion of the Nineteenth and Twenty-third Wards.

† " " " First Ward.

‡ " " " Twenty-fourth Ward.

§ " " " Twenty-first "

TABLE IX.—The number of Deaths in each week, in the City of

1870.		AGES.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
Weeks end- ing.		Total.	Males.	Females.	Boys.	Girls.	Under 1 year.																			Adults.	Minors.	Alms house.	People of Color.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
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								1	2	5	10	15	20	30	40	50	60	70	80	90	100	110	120	130	140					150	160	170	180	190	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350	360	370	380	390	400	410	420	430	440	450	460	470	480	490	500	510	520	530	540	550	560	570	580	590	600	610	620	630	640	650	660	670	680	690	700	710	720	730	740	750	760	770	780	790	800	810	820	830	840	850	860	870	880	890	900	910	920	930	940	950	960	970	980	990	1000	1010	1020	1030	1040	1050	1060	1070	1080	1090	1100	1110	1120	1130	1140	1150	1160	1170	1180	1190	1200	1210	1220	1230	1240	1250	1260	1270	1280	1290	1300	1310	1320	1330	1340	1350	1360	1370	1380	1390	1400	1410	1420	1430	1440	1450	1460	1470	1480	1490	1500	1510	1520	1530	1540	1550	1560	1570	1580	1590	1600	1610	1620	1630	1640	1650	1660	1670	1680	1690	1700	1710	1720	1730	1740	1750	1760	1770	1780	1790	1800	1810	1820	1830	1840	1850	1860	1870	1880	1890	1900	1910	1920	1930	1940	1950	1960	1970	1980	1990	2000	2010	2020	2030	2040	2050	2060	2070	2080	2090	2100	2110	2120	2130	2140	2150	2160	2170	2180	2190	2200	2210	2220	2230	2240	2250	2260	2270	2280	2290	2300	2310	2320	2330	2340	2350	2360	2370	2380	2390	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500	2510	2520	2530	2540	2550	2560	2570	2580	2590	2600	2610	2620	2630	2640	2650	2660	2670	2680	2690	2700	2710	2720	2730	2740	2750	2760	2770	2780	2790	2800	2810	2820	2830	2840	2850	2860	2870	2880	2890	2900	2910	2920	2930	2940	2950	2960	2970	2980	2990	3000	3010	3020	3030	3040	3050	3060	3070	3080	3090	3100	3110	3120	3130	3140	3150	3160	3170	3180	3190	3200	3210	3220	3230	3240	3250	3260	3270	3280	3290	3300	3310	3320	3330	3340	3350	3360	3370	3380	3390	3400	3410	3420	3430	3440	3450	3460	3470	3480	3490	3500	3510	3520	3530	3540	3550	3560	3570	3580	3590	3600	3610	3620	3630	3640	3650	3660	3670	3680	3690	3700	3710	3720	3730	3740	3750	3760	3770	3780	3790	3800	3810	3820	3830	3840	3850	3860	3870	3880	3890	3900	3910	3920	3930	3940	3950	3960	3970	3980	3990	4000	4010	4020	4030	4040	4050	4060	4070	4080	4090	4100	4110	4120	4130	4140	4150	4160	4170	4180	4190	4200	4210	4220	4230	4240	4250	4260	4270	4280	4290	4300	4310	4320	4330	4340	4350	4360	4370	4380	4390	4400	4410	4420	4430	4440	4450	4460	4470	4480	4490	4500	4510	4520	4530	4540	4550	4560	4570	4580	4590	4600	4610	4620	4630	4640	4650	4660	4670	4680	4690	4700	4710	4720	4730	4740	4750	4760	4770	4780	4790	4800	4810	4820	4830	4840	4850	4860	4870	4880	4890	4900	4910	4920	4930	4940	4950	4960	4970	4980	4990	5000	5010	5020	5030	5040	5050	5060	5070	5080	5090	5100	5110	5120	5130	5140	5150	5160	5170	5180	5190	5200	5210	5220	5230	5240	5250	5260	5270	5280	5290	5300	5310	5320	5330	5340	5350	5360	5370	5380	5390	5400	5410	5420	5430	5440	5450	5460	5470	5480	5490	5500	5510	5520	5530	5540	5550	5560	5570	5580	5590	5600	5610	5620	5630	5640	5650	5660	5670	5680	5690	5700	5710	5720	5730	5740	5750	5760	5770	5780	5790	5800	5810	5820	5830	5840	5850	5860	5870	5880	5890	5900	5910	5920	5930	5940	5950	5960	5970	5980	5990	6000	6010	6020	6030	6040	6050	6060	6070	6080	6090	6100	6110	6120	6130	6140	6150	6160	6170	6180	6190	6200	6210	6220	6230	6240	6250	6260	6270	6280	6290	6300	6310	6320	6330	6340	6350	6360	6370	6380	6390	6400	6410	6420	6430	6440	6450	6460	6470	6480	6490	6500	6510	6520	6530	6540	6550	6560	6570	6580	6590	6600	6610	6620	6630	6640	6650	6660	6670	6680	6690	6700	6710	6720	6730	6740	6750	6760	6770	6780	6790	6800	6810	6820	6830	6840	6850	6860	6870	6880	6890	6900	6910	6920	6930	6940	6950	6960	6970	6980	6990	7000	7010	7020	7030	7040	7050	7060	7070	7080	7090	7100	7110	7120	7130	7140	7150	7160	7170	7180	7190	7200	7210	7220	7230	7240	7250	7260	7270	7280	7290	7300	7310	7320	7330	7340	7350	7360	7370	7380	7390	7400	7410	7420	7430	7440	7450	7460	7470	7480	7490	7500	7510	7520	7530	7540	7550	7560	7570	7580	7590	7600	7610	7620	7630	7640	7650	7660	7670	7680	7690	7700	7710	7720	7730	7740	7750	7760	7770	7780	7790	7800	7810	7820	7830	7840	7850	7860	7870	7880	7890	7900	7910	7920	7930	7940	7950	7960	7970	7980	7990	8000	8010	8020	8030	8040	8050	8060	8070	8080	8090	8100	8110	8120	8130	8140	8150	8160	8170	8180	8190	8200	8210	8220	8230	8240	8250	8260	8270	8280	8290	8300	8310	8320	8330	8340	8350	8360	8370	8380	8390	8400	8410	8420	8430	8440	8450	8460	8470	8480	8490	8500	8510	8520	8530	8540	8550	8560	8570	8580	8590	8600	8610	8620	8630	8640	8650	8660	8670	8680	8690	8700	8710	8720	8730	8740	8750	8760	8770	8780	8790	8800	8810	8820	8830	8840	8850	8860	8870	8880	8890	8900	8910	8920	8930	8940	8950	8960	8970	8980	8990	9000	9010	9020	9030	9040	9050	9060	9070	9080	9090	9100	9110	9120	9130	9140	9150	9160	9170	9180	9190	9200	9210	9220	9230	9240	9250	9260	9270	9280	9290	9300	9310	9320	9330	9340	9350	9360	9370	9380	9390	9400	9410	9420	9430	9440	9450	9460	9470	9480	9490	9500	9510	9520	9530	9540	9550	9560	9570	9580	9590	9600	9610	9620	9630	9640	9650	9660	9670	9680	9690	9700	9710	9720	9730	9740	9750	9760	9770	9780	9790	9800	9810	9820	9830	9840	9850	9860	9870	9880
1	2	5	10	15	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350	360	370	380	390	400	410	420	430	440	450	460	470	480	490	500	510	520	530	540	550	560	570	580	590	600	610	620	630	640	650	660	670	680	690	700	710	720	730	740	750	760	770	780	790	800	810	820	830	840	850	860	870	880	890	900	910	920	930	940	950	960	970	980	990	1000	1010	1020	1030	1040	1050	1060	1070	1080	1090	1100	1110	1120	1130	1140	1150	1160	1170	1180	1190	1200	1210	1220	1230	1240	1250	1260	1270	1280	1290	1300	1310	1320	1330	1340	1350	1360	1370	1380	1390	1400	1410	1420	1430	1440	1450	1460	1470	1480	1490	1500	1510	1520	1530	1540	1550	1560	1570	1580	1590	1600	1610	1620	1630	1640	1650	1660	1670	1680	1690	1700	1710	1720	1730	1740	1750	1760	1770	1780	1790	1800	1810	1820	1830	1840	1850	1860	1870	1880	1890	1900	1910	1920	1930	1940	1950	1960	1970	1980	1990	2000	2010	2020	2030	2040	2050	2060	2070	2080	2090	2100	2110	2120	2130	2140	2150	2160	2170	2180	2190	2200	2210	2220	2230	2240	2250	2260	2270	2280	2290	2300	2310	2320	2330	2340	2350	2360	2370	2380	2390	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500	2510	2520	2530	2540	2550	2560	2570	2580	2590	2600	2610	2620	2630	2640	2650	2660	2670	2680	2690	2700	2710	2720	2730	2740	2750	2760	2770	2780	2790	2800	2810	2820	2830	2840	2850	2860	2870	2880	2890	2900	2910	2920	2930	2940	2950	2960	2970	2980	2990	3000	3010	3020	3030	3040	3050	3060	3070	3080	3090	3100	3110	3120	3130	3140	3150	3160	3170	3180	3190	3200	3210	3220	3230	3240	3250	3260	3270	3280	3290	3300	3310	3320	3330	3340	3350	3360	3370	3380	3390	3400	3410	3420	3430	3440	3450	3460	3470	3480	3490	3500	3510	3520	3530	3540	3550	3560																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				

Philadelphia, with the Age, Sex, Nativity and Wards, for the year 1870.

Country.	Nativity.				WARDS.																													
	U. States.	Foreign.	Unknown.		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28		
8	225	69	15	10	12	5	11	10	5	19	8	8	11	9	7	6	6	26	7	8	17	27	21	3	5	5	9	9	18	14	5	2	2	
11	229	83	11	14	14	4	15	8	4	21	9	9	17	8	7	8	7	20	11	14	15	25	12	3	8	15	7	10	14	15	9	1	2	
15	252	69	9	11	19	7	10	12	4	22	12	10	18	8	11	9	3	24	10	15	12	25	22	1	6	7	10	10	17	13	3	3	3	
12	233	75	17	5	13	10	14	12	4	11	11	12	17	4	6	4	4	14	15	18	19	26	25	3	7	10	9	20	17	17	3	3	3	
24	226	76	21	7	14	11	11	10	5	15	7	8	7	6	10	2	9	24	3	11	13	22	22	1	8	7	14	5	27	19	3	7	3	
11	244	68	12	6	12	11	18	16	2	18	10	7	13	6	5	6	8	25	11	6	14	25	23	4	9	7	7	14	16	17	3	7	3	
9	248	73	22	5	15	10	19	11	8	14	10	8	11	7	4	5	7	16	12	15	14	23	24	5	9	3	21	11	17	14	18	7	6	
12	260	82	13	11	20	7	15	7	15	8	23	10	5	6	9	6	11	8	27	11	16	21	23	22	8	9	9	9	13	17	2	6	4	
9	262	49	21	17	19	8	11	6	5	14	13	10	6	9	8	11	6	21	6	5	11	26	24	1	8	8	12	7	20	27	4	2	2	
18	264	71	31	9	14	11	11	15	10	16	7	6	14	11	7	11	7	26	11	13	12	22	23	7	6	9	11	13	18	22	2	2	2	
15	293	70	17	22	16	10	16	15	7	21	5	5	20	10	12	6	5	40	9	11	11	16	18	4	7	5	10	6	22	32	4	2	2	
11	262	71	29	9	16	5	16	18	6	23	7	5	7	4	6	11	12	25	14	17	19	21	17	6	10	6	11	8	27	21	5	5	5	
10	252	52	22	15	17	11	13	11	6	12	3	4	12	10	8	5	9	13	9	9	15	22	21	3	3	9	8	15	5	25	1	2	2	
10	233	67	28	17	20	9	22	10	5	18	10	3	10	8	5	6	8	21	3	14	15	23	24	4	5	5	6	7	16	23	2	2	2	
9	269	60	15	11	15	9	17	11	4	20	8	2	13	2	11	5	18	19	15	12	15	12	32	7	5	8	17	6	18	21	2	2	2	
10	242	69	27	15	9	6	16	7	9	7	15	12	14	14	4	6	8	14	28	10	7	15	30	1	3	8	11	11	17	14	5	5	5	
10	242	65	21	11	13	6	17	11	7	18	5	9	13	4	10	10	8	12	10	10	9	22	22	9	4	8	13	10	16	27	4	2	2	
13	236	67	29	9	18	6	14	11	2	14	9	6	13	8	9	8	6	22	5	10	18	22	20	7	5	8	14	7	18	29	2	2	2	
8	230	69	34	13	15	9	18	8	4	12	9	5	12	9	6	8	5	23	9	12	16	18	15	5	7	11	12	6	20	31	7	7	7	
14	281	74	18	9	20	8	19	11	7	20	10	5	8	3	7	13	9	24	18	14	9	30	29	3	8	5	11	6	27	15	11	1	1	
11	231	64	20	6	20	6	16	13	3	16	9	2	11	4	7	9	4	32	9	6	8	23	16	4	5	6	12	7	18	23	9	9	9	
11	214	47	21	8	11	10	12	11	4	19	15	3	10	6	8	5	7	11	5	14	13	16	19	...	7	8	9	3	11	20	6	6	6	
7	217	58	10	14	8	9	8	9	1	16	2	5	7	4	8	5	10	18	8	15	10	25	18	2	7	5	11	5	8	18	22	2	2	
6	187	46	20	9	7	2	9	9	3	13	9	5	8	4	6	5	13	19	9	9	15	21	14	1	6	9	6	9	4	16	7	7	7	
10	231	50	39	13	12	6	12	16	3	17	8	6	8	9	7	9	16	22	6	12	16	19	20	3	6	3	6	4	14	28	9	9	9	
19	316	79	19	13	24	13	22	18	8	21	6	7	7	7	4	9	4	22	9	14	13	40	31	8	12	11	17	3	21	22	9	9	9	
15	271	69	15	14	24	10	13	13	7	21	8	3	5	5	6	7	7	24	13	22	18	27	20	2	9	9	6	6	16	11	14	8	8	
6	281	63	5	20	19	12	16	12	6	23	16	4	5	15	4	7	9	16	9	12	17	22	25	7	5	8	8	7	21	10	8	8	8	
17	468	104	29	24	23	12	21	24	9	29	20	19	11	18	16	13	18	47	21	32	19	49	40	6	19	5	13	8	30	39	6	6	6	
30	478	117	16	21	22	19	23	23	15	33	19	10	23	18	19	7	19	40	11	23	20	49	50	13	8	13	12	10	31	22	8	8	8	
15	349	67	15	27	20	9	17	13	1	21	13	6	10	13	5	8	8	27	10	17	12	33	31	12	13	14	23	7	17	20	9	9	9	
23	355	61	16	19	24	4	18	13	9	20	8	7	12	10	6	10	8	26	15	16	23	31	25	5	17	13	19	8	19	17	7	7	7	
14	306	52	18	14	22	14	18	8	6	19	9	5	8	7	9	8	9	27	11	18	12	21	28	4	11	8	18	9	16	17	6	6	6	
20	255	48	14	19	18	10	14	10	5	18	9	6	7	5	5	6	4	21	6	7	15	17	30	3	9	10	12	4	13	11	1	1	1	
15	258	64	13	16	18	10	17	15	7	16	7	7	9	5	3	14	4	12	10	10	9	23	23	7	10	7	7	14	22	14	4	4	4	
14	221	44	16	14	8	4	13	16	1	13	10	2	7	4	5	7	5	20	5	8	11	24	21	6	4	8	7	11	16	13	4	4	4	
12	207	65	7	11	11	10	10	10	2	13	9	6	7	4	7	3	7	4	12	4	12	10	14	24	7	11	9	16	5	13	17	9	9	
9	207	50	8	12	13	6	11	9	5	19	6	5	10	7	1	2	9	22	5	8	14	19	10	2	6	8	13	12	19	1	1	1	1	
10	198	57	15	10	19	5	10	10	3	10	9	7	8	9	3	3	7	5	7	7	10	24	13	5	9	7	9	6	29	15	...	5	5	
7	175	49	7	7	6	5	7	12	6	12	5	4	6	5	3	6	3	16	8	9	7	23	20	2	7	4	7	4	14	11	5	5	5	
5	173	51	5	10	11	8	10	8	2	12	6	7	6	7	5	6	5	9	5	8	3	14	23	...	13	9	6	7	12	9	5	3	3	
10	176	48	11	5	9	6	7	12	3	14	1	5	9	5	4	4	5	7	15	3	14	5	20	2	14	8	8	7	10	10	4	4	4	
9	171	51	13	16	16	5	7	11	3	13	2	4	6	4	4	3	9	9	7	3	17	10	11	9	8	8	7	8	9	14	3	3	3	
13	167	47	16	10	13	6	10	10	5	11	7	6	3	6	4	4	11	12	2	5	9	14	14	1	5	2	11	9	13	13	...	3	3	3
7	172	63	21	7	5	8	7	8	7	13	6	3	5	5	6	3	8	18	6	12	6	21	23	2	9	11	9	5	13	20	3	3	3	
10	182	53	11	11	15	10	19	6	2	14	6	3	6	6	5	6	2	15	5	7	13	14	16	4	7	6	8	4	9	15	3	3	3	
8	171	54	15	8	19	6	11	11	5	20	4	5	5	6	4	4	8	9	5	7	14	13	10	6	3	4	9	5	17	10	4	4	4	
9	193	53	10	16	14	8	10	6	11	4	5	4	5	4	6	7	9	8	17	5	4	17	21	17	2	10	5	4	7	13	14	3	3	
4	169	56	16	13	12	5	10	7	4	16	8	4	7	4	5	8	4	15	3	7	8	18	10	5	5	5	4	5	16	18	1	1	1	
7	197	58	11	10	9	3	19	8	6	20	9	4	5	10	6	7	5	17	9	15	12	17	18	5	4	5	11	3	7	12	3	3	3	
8	195	46	16	10	6	3	13	5	1	16	6	7	4	7	3	4	8	12	6	4	10	21	26	8	9	9	13	4	17	15	2	2	2	
11	210	57	13	8	15	9	21	6	6	21	9	8	7	3	3	3	8	5	13	10	11	12	19	9	1	9	5	10	3	20	14	4	4	
611	12,584	3,273	893	635	786	422	732	586	264	896	440	321	478	359	336	339	402	1050	446	595	678	1182	1114	230	42									

TABLE X.—DEATHS. *Adults and Children.*

1870.					
MONTHS.	Males.	Females.	Adults.	Children.	Total.
January,	650	637	679	608	1,287
February,	723	625	670	678	1,348
March,	932	834	871	895	1,766
April,	723	615	647	691	1,338
May,	871	764	829	806	1,635
June,	655	617	603	669	1,272
July,	1,041	875	731	1,185	1,916
August,	971	920	656	1,235	1,891
September,	556	539	521	574	1,095
October,	502	428	486	444	930
November,	638	590	692	536	1,228
December,	525	519	540	504	1,044
	8,787	7,963	7,925	8,825	16,750
	16,750		16,750		
Excess of males over females,					824
Excess of children over adults,					900

It will be observed from the foregoing table that the number of male deaths amounted to eight thousand seven hundred and eighty seven (8,787), and the number of females seven thousand nine hundred and sixty-three (7,963), an excess of males of eight hundred and twenty-four (824).

The number of children that died amounted to eight thousand eight hundred and twenty-five (8,825), an excess of nine hundred (900) over that of adults, and when compared with the entire mortality is equal to 52.68 per cent., or more than one-half of the total deaths in the city.

TABLE XI.

Marriages, Births and Deaths for each month.

1870.			
MONTHS.	Marriages.	Births.	Deaths.
January,	580	1,560	1,287
February,	486	1,376	1,348
March,	493	1,358	1,766
April,	472	1,262	1,338
May,	518	1,301	1,635
June,	526	1,332	1,272
July,	442	1,420	1,916
August,	421	1,528	1,891
September,	562	1,504	1,095
October,	683	1,528	930
November,	639	1,416	1,228
December,	599	1,609	1,044
Total,	6,421	17,194	16,750

The following table will show a general summary of the returns of the Department for the past ten years and six months.

TABLE XII.

YEARS.	Births.	Marriages.	Deaths.
1860 (Six Months),	8,434	2,310	6,342
1861,	17,271	4,417	14,468
1862,	14,741	4,662	15,097
1863,	15,293	5,474	15,788
1864,	15,591	6,752	17,582
1865,	15,428	6,864	17,169
1866,	17,437	7,087	16,803
1867,	17,007	6,084	13,933
1868,	17,259	6,371	14,693
1869,	16,960	6,382	14,786
1870,	17,194	6,421	16,750
Total,	172,615	62,824	163,411

The foregoing table shows the number of Births, Marriages and Deaths recorded during the past ten years and six months ; Births, one hundred and seventy-two thousand six hundred and fifteen (172,615) ; Marriages, sixty-two thousand eight hundred and twenty-four (62,824) ; and Deaths, one hundred and sixty-three thousand four hundred and eleven (163,411) ; previous to the year 1866, for several years the deaths exceeded the births, but since that year the births have exceeded the deaths, showing a steady natural increase of our population ; and if the births could be had more perfect, the excess would be far more satisfactory.

Respectfully submitted,

JOHN E. ADDICKS, *Health Officer.*

Attest: GEO. E. CHAMBERS, *Registrar.*

E. WARD, M. D.,

President.

CHARLES B. BARRETT,

Secretary.